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NEVADA STATE MUSEUM
ANTHROPOLOGICAL PAPERS NO. 7

Anthropological papers (Nevada State Museum),

ARCHAEOLOGICAL SURVEY
IN
SOUTHERN NEVADA

By
RICHARD SHUTLER, JR.
and
MARY ELIZABETH SHUTLER

Carson City, Nevada September 1962

This Report is Dedicated

to the Memory of

Fay Perkins

Long Time Friend of Archaeology

in Southern Nevada

TABLE OF CONTENTS

PREFACE. i

INTRODUCTION 1

  Historical Periods in Southern Nevada. 1

THE VALLEY OF FIRE. 3

  Geology 3

  Ecology 4

  Archaeological Sites 5

  MATERIAL CULTURE 7
    Stone Implements 7
      Ground and Pecked Stone Artifacts. 7
        Metate 7
        Manos 7
      Chipped Stone 8
        Projectile Points 8
        Flake Knives 8
        End Scrapers 9
        Choppers 9
        Hammerstones 10
        Plano-convex Scraper. 10
        Rubbing-hammerstone 10
        Thumbnail Scraper 10
        Tortoise Shell. 10

    Pottery 11

  Petroglyphs 14

  Summary and Conclusions 15

THE RED ROCK CANYON AREA 17

  Geology 17

  Ecology 18

  Archaeological Sites 18

  MATERIAL CULTURE 20

Stone Implements 20
    Manos. 20
    Flake Knives 20
    Chopper. 20
    Hammerstones. 21
    Pecking Stone. 21
    Worked Vesicular Basalt 21
Pottery. 21

Mescal Pits. 22

Petroglyphs. 23

Summary 24

REFERENCES CITED 31

EXPLANATION OF PLATES. 33

TABLES

1. Pottery Types at Valley of Fire Sites. 13

2. Valley of Fire Petroglyph Sites. .25

3. Comparison of Design Elements with other areas of Nevada. 27

4. Pottery Types from Red Rock Canyon Area Sites 29

5. Red Rock Canyon Area Petroglyph Sites 30

MAPS

1. Valley of Fire State Park. . . . . .in pocket

2. Red Rock Canyon State Park. . . . . .in pocket

PREFACE

> "The function of the Nevada State Park Commission is to acquire, protect, develop, and interpret a well balanced system of areas of outstanding scenic, recreational, scientific, and historic importance for the inspiration, use, and enjoyment of the people of the state."
>
> --Preamble to Commission Policy

The real justification for a system of state parks and monuments is to make the forces of nature, human achievement, and scientific phenomena comprehensible to people from all walks of life. It is not enough to erect a sign which points to a design chiseled into a rock wall by ancient men inscribed "petroglyph". Questions about the nature of the men who did the work, where and how they lived, the way the area looked when these ancient men hunted, ate and slept at this spot must be answered. This is the job of interpretation.

The Nevada State Park Commission has made clear that only natural and historic sites of "outstanding" quality shall be acquired by State government. The criteria used is the relation of a particular area or event to an understanding of the State's natural and historic heritage. Thus a fort site which typifies settlement patterns, the site of the first town, the path of Spanish padres to California, or the display of firey red jurassic sandstone are parts of a series of related narratives which together explain, in situ, what Nevada means. A further example of how these chains fit together might be that one phase of Nevada's history is the mining frontier; there are three major eras of mining history; that journalism was a vital part of the first era--represented geographically by the Virginia City to Ward Mountain belt; the one physical plant in this zone typifying journalism on the mining frontier is the Eureka Sentinel--thus it has been designated as an historic state monument.

Research plays a vital part in the interpretive process. First, one has to determine if an area under consideration makes a maximum contribution to an understanding of Nevada. Then full and complete knowledge must be available before thorough explanation is possible.

Thus, a thorough investigation of each existent and proposed unit of the state park system must be made to fully appreciate the full contribution to man's understanding of his surroundings.

To assure that rigorous standards are met before recommending the addition of a new unit, the State Park Commission has established a procedure which requires statement from eminent scholars in various fields evaluating the contribution the features of the area under consideration make to man's understanding. Such statements are evaluated and if sufficient justification exists, they become part of a "Feasibility Report" made to the Legislature.

Once areas have been accepted to project status and funded for planning, research in the areas of particular significance is commissioned to guide the preparation of the master development plan.

An example of both kinds of work are included in this Archaeological Report. The State Park Commission directed that a master plan be prepared for Valley of Fire State Park and a Feasibility Report be prepared to substantiate the natural and cultural characteristics qualifying the Red Rock Canyon area west of Las Vegas for state park status.

It was known from field observations that both areas abounded in petroglyphs. Pictographs had been found in the Red Rock Area. The next job was to determine the extent of pre-historic occupation, the time span of such occupation, and an evaluation of the two areas from the standpoint of contributing an understanding of pre-historic man in what is now Nevada.

Since there are no qualified archaeological personnel attached to the staff of the State Park System, the cooperation of the Nevada State Museum was solicited and graciously granted.

The Nevada State Park System is extremely happy that it has been able to contribute to the effort of a qualified scientific research project by the staff of the Nevada State Museum. It is hoped that the contribution will add to the pleasure and understanding of all people who visit the Nevada State Parks considered here.

William J. Hart, Director
Nevada State Park System

INTRODUCTION

This report contains the results of an archaeological survey of two areas in Clark County, southern Nevada. The areas surveyed were the Valley of Fire, located about 40 miles northeast of Las Vegas, and the Red Rock Canyon area, situated about 20 miles west of Las Vegas (maps 1 and 2).

The survey of these two areas and publication of the results were carried out under the terms of a contract with the Nevada State Park Commission. The field work was under the direction of the senior author, and performed during November and December, 1961. The archaeological survey of Federal Land was carried out under a Federal Antiquity Act Permit granted to the Nevada State Museum by the Department of the Interior.

Detailed site location and descriptions are omitted in this report to prevent vandalism. Qualified persons may see this information in the files of the Nevada State Museum. The State Park Commission has some of the petroglyph sites in the Valley of Fire prepared for exhibit. The general site locations are recorded on maps 1 and 2.

Acknowledgements

The generous assistance of several individuals made the successful completion of the field work possible. We are grateful to Mr. Voris Perkins of Moapa, Messrs. Fay Perkins, Marsten Perkins, and Cleo Whitney of Overton, and Mr. L. J. McCormick of Glendale, for their cooperation and courtesies of many kinds during the work in the Valley of Fire. To Mr. Peter J. Herlan, we express our thanks for his valued assistance with the field work in the Valley of Fire. We wish to thank Miss Carol Bailey for the fine work she did on the comparative analysis of the petroglyphs.

We wish to particularly thank Dr. Chester R. Longwell for the description of the geology of the Red Rock Canyon area, written especially for this report. We wish to thank Dr. and Mrs. Joseph I. Leveque of Las Vegas for their hospitality while we were working the Red Rock Canyon area. To Mr. and Mrs. K. K. Miller, and Mrs. George Heyer of Little Red Rock Canyon we are grateful for their cooperation and help in getting around the area. Mr. William Belknap of Boulder City produced the excellent photographs of the illustrated artifacts (Pls. 1-6).

Historical Periods in Southern Nevada

The Colorado River which forms the southeastern boundary of Nevada has attracted the adventuresome for over 400 years. There are essentially four historical periods for the area along the Colorado River which includes southern Nevada. These are The Spanish Period, the Fur Traders Period, the Steamboat and Rivermen Period, and the last, the Settlement of Southern Nevada Period.

The Spanish Period began in 1539-40 with Ulloa and Alarcon exploring the lower Colorado River, and Cardenas discovering the Grand Canyon in 1540. On October

15, 1776, Escalante crossed the Virgin River (Bolton 1950: 96), and later the same year November 7, crossed the Colorado River at the Crossing of the Fathers in southern Utah (op. cit.: 118). In this same year Garces went to California and back to Santa Fe by the southern California desert route. During this trip Garces discovered and named what is known as Tehachapi Pass (op.cit.: 3).

The Fur Trader Period began with James Ohio Pattie, who in 1825,made the first real trip along the Colorado River, trapping beaver, passing through what is now southern Nevada. In 1826-27, Jedediah Smith, came down from Salt Lake City along the Virgin River, down the Colorado River to near what is now Needles, California, and returned by the same route to Salt Lake City.

The Steamboat and Rivermen Period began in 1850. In this year Capt. George A. Johnson came up the Colorado River by boat to Black Canyon where the boat was wrecked. He then went overland to the Walapai, Hopi, and Fort Defiance. From 1869-1872 Major John Wesley Powell explored the Colorado River from its source. Jacob Hamblin, a mountain man, explored this area from 1855 to 1875. In 1869-70 Capt. George Wheeler carried on a geographical survey of the Virgin-Colorado river area and investigated the navigability of the Colorado River from Eldorado Canyon to Fort Mohave. John C. Fremont passed through southern Nevada in 1853-54.

The Settlement of Southern Nevada Period began in 1847 when Mormons acting on order of Brigham Young first visited the Las Vegas area. Las Vegas was settled in 1855. St. Thomas and Overton were settled about 1865.

Geology

The Valley of Fire lies in the basin and range province. The basin and range province is characterized by north-south trending mountain ranges. They differ considerably in structure. Some are formed by the tilting of rock layers through movement along normal faults, but others are extremely complex and involve folding, thrust faulting, and several stages of normal faulting. The north Muddy Mountains which form the western boundary of part of the proposed park, represent the more complex type.

Longwell has described the geology of the Valley of Fire (1928: 8-9, 133-134). The floor of the Valley of Fire is gashed by washes into many minor irregularities. Its drainage is accomplished through three main channels. At the north, Logan Wash, six miles long, traverses the valley to the Muddy River. The runoff from the central portion of the valley flows into Overton Wash, which cuts directly through the high ground on the east to join the Muddy River. The southern part of the valley sends its flood water to the Virgin River through a long wash locally known as Bitter Wash. Considerable areas of the Valley of Fire are covered by a thin accumulation of rock waste. Wherever washes have reached, however, they have exposed large surfaces of the underlying rocks, which exhibit many hues of red, yellow, brown, and gray.

The most scenic surface forms of the region are in the red sandstone, which is carved into amazingly intricate patterns. Spires, domes, and serrate ridges are characteristic of the area, and in this setting, of a few scattered remnants of mesas capped with gravel, are very conspicuous. The largest of these remnants, Base Line Mesa, is six miles west of St. Thomas. Its even top, nearly a mile in length is a striking feature in the landscape. The eastern part of the area drains to the Virgin through Little Bitter Wash. East and north of the red sandstone belt the topography changes in character but does not decrease in ruggedness. The low ridges and irregular hills are characteristic of Overton Ridge. Its sharp crest is more than 200 feet above the beds of the washes that cross it in narrow canyons. Between this ridge and the Moapa Valley flat-topped gravel-covered mesa remnants appear as islands surrounded by a rugged surface-dissected clay.

The long north-south arm of the valley (Valley of Fire Wash) is an expression of the relatively slight resistance of the Moenkopi and Chinle shales, the Kaibab and Moenkopi limestones rising sharply on one side of the Jurrassic (?) sandstone on the other.

In width the valley ranges from less than half a mile to slightly more than two miles; it narrows toward the north end, where the dips are steepest and where the Overton fanglomerate overlaps the Triassic of the longer arm but become more ragged in the zone of cross faulting and near the elbow. There are gentle slopes northward and eastward from the bend, and the floor is comparatively even as a whole, but with many small irregularities caused by projecting edges of resistant sandstone layers and by recent trenching of washes. Recent waste formerly covered the floor and still remains in and near the elbow, but near the outer ends of the area drainage channels have stripped off most of the loose materials and exposed the edges of weak bedrock. The east arm has much the more uneven surface, because sandstone layers are more numerous in this section and the outcrops are duplicated by anticlinal structure, forming a number of hogback ridges and buttes 20 to 60 feet high. In this part of the valley there are also several large Jurrassic (?) sandstone buttes, remnants that have not yet been eroded from the top of the anticline.

Several minerals of commercial use are found in the Muddy Mountains: gypsum, colemanite, gray clay, magnesite, and quartz sand. Several of these minerals would have also been useful to the Indian inhabitants of the Valley of Fire area. Gray clay and quartz sand may have been used in pottery making, and magnesite for making ornaments. Ornaments made from magnesite were found at Lost City sites.

Ecology

The Valley of Fire is in the Lower Sonoran life-zone. The creosote bush (*Covillea tridentata*) is the most characteristic single plant of this zone. Other plants are desert salt bush (*Atriplex polycarpa*), mormon tea (*Ephedra vividis*), catclaw (*Acacia greggi*), mesquite (*Prosopis gladulosa*), screwbean (*Strombacarpa odonata*), barrel cactus (*Echenocacus*), prickly pear (*Opuntia basilaris Engelm*), yucca (*Yucca* 4 sp.), agave (*Agave utahensis Engelm*), joshua tree (*Clistoyucca brevifolia*), sunflower (*Helianthus*). Most of these plants were useful as food or in manufacturing to the Indians. Mesquite, screwbean, joshua tree, yucca, the cacti, and sunflower were all important food plants. Stewart (1942) reports that the Southern Paiute ate Yucca fruit and buds, used the root as soap, and tips of the leaves as a comb.

During moist years certain grasses also provided seeds for food: wheat grass (*Agropyron*), red top grass (*Agrostis*), blue grass (*Poa*), and needle grass (*Stipa*).

The fauna of the Valley of Fire during the time of aboriginal occupation included mountain sheep (*Ovis canadensis*), now very rare; jackrabbit (*Lepus californicus*) and cottontails (*Sylvilagus fornidanus*); several species of small rodents, rats, mice, chipmunks and ground squirrels were abundant; coyotes (*Canis latrans*); the desert tortoise (*Gopherus agassize*), and several species of snakes and lizards.

Most of these animals would have been a source of food for the Indians. The mountain sheep seem to have been the most important of the food animals in the Valley of Fire. Petroglyphs representing them abound and attest to the interest the Indians had in them. Perhaps the presence of mountain sheep was the main factor in drawing hunting parties to the Valley of Fire. Both the Anasazi people of Lost City (Shutler 1961) and the Southern Paiute (Steward 1938) hunted mountain sheep. Rabbits were taken by both the Anasazi (Shutler 1961) and the Southern Paiute not only for their flesh but for their skins which were woven into fur cloth blankets. The desert tortoise seems to have been a popular item of diet for the Anasazi and Paiute who camped at Stuart Rockshelter (Shutler, and others 1960) near Moapa, Nevada.

Rodents and lizards were also eaten by the Southern Paiute.

Water sources in the Valley of Fire are mainly depressions in the rock which are filled with water by rain. In addition there were several springs according to local people. Water, of course, fills the washes during rain storms, but it flows too briefly and too violently to be of use to man. Most of the campsites were located near a water source. In addition visitors to the Valley of Fire must have carried some water with them. Both the Anasazi and the Southern Paiute had pitch covered baskets and pottery jars for this purpose.

Archaeological Sites

The characteristic archaeological site in the Valley of Fire is the campsite in a rockshelter. The red sandstone, which is the predominant rock exposed in the valley, weathers to form overhangs. These overhangs provide shelter from the weather, and were used as camping places by the various Indians who were passing through the valley, or had come to hunt mountain sheep and other animals, and to gather seeds. No camping places other than at the base of these red sandstone shelters were noted, except in large potholes weathered in the sandstone such as Cl-196, Cl-197 (Pl. 8, a, b).

Most of the sites are in the southern and central portion of the proposed park area. Many shelter sites, particularly those on the north side of the Valley of Fire Wash, have had their deposit washed away. Most of those we recorded are badly eroded and will eventually be completely washed out. Mr. Fay Perkins of Overton told us the campsites along the lower reaches of the Valley of Fire Wash are also washed out.

Thirty-two sites were recorded (Cl-192 - Cl-223 of the Nevada State Museum site numbering system): of these 15 had pottery and in most cases some artifacts or flaking debris with no petroglyphs; 10 had pottery and/or artifacts and petroglyphs; and seven are known from petroglyphs only (see map 1). Of the 25 sites with pottery 21 sites consist of predominantly Lost City pottery, demonstrating that the sites have been used over the entire time span of Anasazi occupation of this region from about A.D. 300 to 1150.

Site Cl-207 of this report (Atlatl Rock), is the same as Cl-1 in Heizer and Baumhoff (1962). Site Cl-203 of this report (Mouse's Tank), is the same as Cl-145 in Heizer and Baumhoff (op. cit.).

No sites were located in the northern portion of the proposed park area.

Most of this region is composed of gravel-topped hills and on the west the upper reaches of the Valley of Fire Wash. In the red sandstone portion of this area we did note a number of likely looking shelters. But they are filled with from one to several feet of wind blown sand, so no archaeology, if present, could be seen. No petroglyphs were noted in this region.

All petroglyph and pictograph sites known to local experts (Voris Perkins, Fay Perkins, Marsten Perkins) are recorded on Map 1, plus the additional ones we located. These are discussed elsewhere in the report.

We found no evidence of any pithouses or puebloes within the prescribed park boundaries. Local experts on the area said they had never seen any in the region. The architectural sites are apparently confined to the permanent villages of the Anasazi people who lived along the Muddy and Virgin rivers (Shutler 1961).

Typical archaeological sites in the Valley of Fire are shown in Plates 7 - 9.

Stone Implements

Few stone artifacts were recovered from the sites in the Valley of Fire, and most of those we found are of such a nondescript nature as to be unassignable to any definite culture such as Anasazi or Paiute. Aside from the grinding tools found at sites Cl-195 and Cl-200, only chipped stone implements and debris were recovered. Generally, the stone tools, projectile points, blades, scrapers, choppers, hammerstones, are thetypes expected to occur at hunting camps, used in the skinning of animals, and preparation of hides.

Many of the artifacts recovered from the Valley of Fire sites are typical of those reported from Lost City (Shutler 1961). Since the occupants of this region were mainly from the Lost City area, this situation is to be expected. To facilitate comparison of the artifacts reprted here with those of other areas, each artifact is described. For additional comparison, when the artifact described here is reported and illustrated from Lost City (op. cit.), the plate number is given in parenthesis.

Ground and Pecked Stone Artifacts

Grinding tools in the form of manos were found at only two sites, Cl-195, four manos, and Cl-200, one mano. The presence of grinding implements suggests more intensive occupation at these two sites. Women were no doubt here as they were the customary ones to use these tools. They may have been base camps, occupied for some length of time, from which the men hunted in the area, rather than the sites of short occupation, occupied by hunting parties of men only.

The following abbreviations are used throughout in connection with artifact descriptions: lg. for length; wd. for width; th. for thickness; st. for straight; cm. for centimeter; mat. for material.

Metate

Cl-195. Small fragment of vesicular basalt, slab type (op. cit.: Pl. 58, c).

Manos

Cl-195. Three specimens. 1. Oval shape, biface, one-hand, mat. conglomerate. Used with basin metate. Plate 1, c (Shutler 1961: Pl. 59, c), lg. 14.3, wd. 11.6, th. 6.1 cm. 2. Rectangular with rounded ends, biface, one-hand, mat. vesicular basalt. Used with slab metate. Plate 1, a (op. cit.: Pl. 59, b), lg. 10.9, wd. 9.3, th. 4.0 cm. 3. Fragment, rectangular with rounded ends, biface, one-hand, mat. granite. (op. cit.: Pl. 59, b), wd. 10.5, th. 5.0 cm.

Cl-200. Oval shape, biface, one-hand, mat. sandstone. Ends show use as a hammerstone. Used with basin metate. Plate 1, b (op. cit.: Pl. 59, c). lg. 9.9, wd. 8.3, th. 4.5 cm.

Chipped Stone

A small number of diagnostic projectile points were found in the Valley of Fire. A beautiful, triangular, corner-notched Basketmaker III dart point was picked up on the surface in the open (Pl. 2, e) lg. 5.1, wd. 2.9, th. 0.5 cm. Another Basketmaker III dart point fragment was picked up on the surface in the open. A Desert Side-notched arrowpoint was found at Cl-192. Two of this type were recovered from Cl-214. These Desert Side-notched arrowpoints are the type customarily found with Southern Paiute Brown Ware. Southern Paiute Brown Ware was recovered from sites Cl-192 and Cl-214.

Flaking debris was noted in varying quantities at 14 of the sites recorded. This demonstrates that stone tools were made on the spot, probably as old ones were broken, and new ones needed.

Projectile Points

Cl-192. Triangular in shape, side-notched, base-notched (Pl. 2, a). Corresponds to Baumhoff and Byrne Sierra subtype. They report it is common in the Great Basin (Baumhoff and Byrne 1959: 38, Pl. 1, g - k). Southern Paiute type (Shutler 1961: Pl. 65, z, aa). Mat. chert, lg. 2.6, wd. 1.2, th. 0.25 cm.

Cl-201. Triangular, st. base, serrated sides, chert. Plate 2, d. lg. 3.4, wd. 1.6, th. 0.4 cm.

Cl-214. 1. Triangular, side-notched point, chert, V-base. Plate 2, b. wd. 1.0, th. 0.3 cm. (Shutler 1961: Pl. 65, bb).
2. Distal portion of triangular, side-notched point, chert. Plate 2, c (op. cit.: Pl. 65, bb).

Flake Knives

Cl-192. Fragment, bifacial, percussion flaked, edges retouched, base convex, ovoid in shape, Plate 2, f. Mat. chert, wd. 2.3, th. 0.8 cm.

Cl-195. Two Specimens. 1. Leaf-shaped fragment, bifurcated base, Plate 3, b. wd. 2.9, th. 1.1 cm. 2. Two large flakes with one edge showing use flaking.

Cl-199. Basal portion of a leaf-shaped knife, mat. chert.

Cl-200. Four specimens. 1. Roughly leaf-shaped, edge bifacially flaked by percussion, Plate 2, g. Mat. quartzite, lg. 4.3, wd. 1.9, th. 0.6 cm. 2. Fragment, tip triangular-shaped, edges bifacially percussion flaked. Mat. chert, wd. 2.3, th. 0.7 cm. 3. Two flakes with edges showing use flaking.

Cl-207. Fragment, st. sides, convex base, mat. chert. Percussion flaking. Part of original crust remains. No retouch on edges. Plate 3, e, wd. 3.9, th. 1.5 cm.

Cl-208. Irregularly shaped, one edge shows use flaking. Plate 3, c, mat. chert, lg. 4.6, wd. 4.2, th. 1.6 cm.

Cl-213. Leaf-shaped, convex base, one edge bifacially trimmed by percussion to form a knife edge. Plate 3, f, mat. chert, lg. 5.1, wd. 3.3, th. 1.9 cm.

Cl-214. Two specimens. 1. Triangular shape, convex base, edges retouched. Plate 2, k, mat. chert, lg. 7.7, wd. 3.5, th. 0.7 cm. 2. Leaf-shaped fragment. Plate 3, a, mat. quartzite, wd. 3.3, th. 1.3 cm.

Lost City knives are illustrated in Plates 67, a - y, 68, j - z of the Lost City report (Shutler 1961). Artifacts referred to as blades in the Lost City report are herein called knives.

End Scrapers

Cl-194. One edge retouched on convex side for use as a scraper. Mat. chert, lg. 5.4, wd. 4.5, th. 1.8 cm., Plate 1, d.

Cl-209. Ovoid chert flake, one end trimmed by percussion to form a working edge. Plate 2, i, lg. 3.7, wd. 2.2, th. 0.8 cm.

Choppers

Cl-195. Four specimens.

1. Small flat sandstone cobble, both ends bifacially flaked by percussion to form a ragged chopping edge. One side has some flakes removed, part of the original crust remains (op. cit.: Pl. 63, b).

2. Flat sandstone cobble, with one end bifacially flaked by percussion to form a ragged working edge. Most of original crust remains.

3. Rounded sandstone cobble, both sides bifacially flaked to form a ragged working edge which shows much use. Some original crust remains. Plate 4, b.

4. Angular sandstone cobble, one side bifacially flaked to form a ragged working edge. Other side flaked on one side only, shows use. Part of original crust remains.

Size range: lg. 8.6 - 11.3 cm.
wd. 6.6 - 11.1 cm.
th. 2.9 - 5.2 cm.

Cl-233. Flat quartz cobble. Edge around entire circumference bifacially trimmed by percussion to form a ragged working edge, no retouch. Plate 4, d (op. cit.: 63, f), lg. 7.6, wd. 6.2, th. 3.9 cm.

Hammerstones

Cl-195. Three specimens.

1. Rounded sandstone cobble, both ends show pecking from use as a hammerstone. Part of original crust remains. (Shutler 1961: Pl. 63, c).

2. Cobble fragment, one end pecked from use as a hammerstone. Part of original crust remains. (op. cit.: Pl. 63, d).

3. Flat, oval sandstone cobble. Both ends show pecking from use as a hammerstone. Plate 1, d.

Size range: lg. 8.7 - 10.9 cm.
wd. 6.6 - 9.6 cm.
th. 5.6 - 6.6 cm.

Plano-convex Scraper

Cl-195. One end of convex side used as hammerstone. Plate 4, a. Mat. fine-grained basalt, lg. 8.8, wd. 7.5, th. 5.1 cm.

Rubbing-hammerstone

Cl-208. Rounded sandstone cobble. Ends are pecked from use as a hammerstone; one side is worn from use as a rubbing stone. Plate 4, c, lg. 7.2, wd. 6.2, th. 5.4 cm.

Thumbnail Scraper

Cl-214. Flake, one edge retouched to form a working edge. Plate 2, j, mat. quartzite, lg. 3.2, wd. 2.4, th. 0.6 cm.

Tortoise Shell

Tortoise shell fragments were found at Cl-208. Tortoise shell is reported in quantity from other sites in southern Nevada, indicating this desert animal was used for food (Shutler, and others 1960; Shutler 1961). The desert tortoise was no doubt also used for food in the Valley of Fire.

Pottery

All the pottery types found in the Valley of Fire have been described in various publications (Baldwin 1950; Colton 1952, 1958; Schroeder 1955).

Potsherd collections from surface sites provide information limited to indications of the people who camped in the region and the length of time the area has been inhabited.

The pottery found at the archaeological sites within the proposed park area is predominantly the Lost City Basketmaker and Pueble pottery. These agricultural people, living along the banks of the Muddy and Lower Virgin rivers were the principal users of the Valley of Fire from A.D. 500 to 1150. Lost City pottery was found at all but four of the sites at which pottery was recovered, that is, 21 sites. The other four pottery sites consist of two Paiute campsites and two campsites at which Lower Colorado River Buff Ware was found exclusively, indicating people from below Hoover Dam camped there.

Intrusive pottery from outside this region demonstrates that people from other cultural areas were coming to the Lost City area for at least 2,000 years.

A few sherds of Snake Valley Gray at Cl-208 show the Puebloid people who came from western Utah were in the Valley of Fire. This type was made in Basketmaker III times, A.D. 500 - 700. A number of sherds were found indicating other Branches of the Anasazi Culture. Shinarump Brown, a Pueblo III type made in the upper Virgin drainage, was noted at several sites. One Lino Gray sherd, a Basketmaker III type from the Kayenta Branch of the Anasazi in northern Arizona, was recovered at site Cl-216 (Pl. 9, d). One Tusayan Black-on-red sherd, a late Pueblo II - early Pueblo III type from the Kayenta Branch of the Anasazi was recovered from Cl-217 (The Three Cabins). This is the only black-on-red sherd found during the survey. A few Paria Gray sherds, a Basketmaker III - Pueblo I type from the Paria drainage, Kane County, Utah were recovered at Cl-195 (Pl. 7, d). Many Patayan sherds were also found. One Aquarius Brown sherd, which belongs to the Cerbat Branch of the Patayan Culture, was recovered at Cl-217. This is a Tizon Brown Ware sherd, A.D. 900 - 1890. ..."Tizon Brown Ware was made by Upland Arizona Yuman Indians, principally the Walapai, and their direct ancestors of the Cerbat Branch" (Dobyns and Euler, in Colton Ed. 1958). Thus it is possible that the Walapai made use of this area in historic times. Deadman's Gray (Pueblo I - II, Pre-A.D. 700 to 1150) and Kirkland Gray (Pueblo II) are types of San Francisco Mountain Gray Ware of the Cohonina Branch of the Patayan Culture noted at a few sites. From this we know that people from the Flagstaff area came to the Lost City region. Lower Colorado River Buff Ware (A.D. 800 - post-1900) in the form of Pyramid Gray predominated. This ware was widely traded on the Colorado River, and to the west and east. The homeland of the people making this pottery was below the present Hoover Dam. The amount of Pyramid Gray identified at the Lost City sites (Shutler 1961) suggests that it was also made locally. Since this pottery lasted into historic times, these people might have continued coming to the area after the departure of the Anasazi people.

Southern Paiute Brown Ware was found at most of the sites where Pueblo and other pottery types were recovered, and exclusively at two campsites. Southern Paiute Brown Ware was also noted at most of the Lost City sites. The Southern Paiute entered southern Nevada sometime between A.D. 700 and 1100 (op. cit.).

The small sherd sample from the recorded sites makes it impossible to assign the individual sites to Lost City phases. Indeed, popular campsites seem to have been visited by different people over a long period of time. The period of heaviest occupation of the Valley of Fire was the Lost City Phase, A.D. 700 - 1100. Whether the pottery indicates actual physical presence of these people in the valley or are trade pieces is impossible to say. But we do know these people were in the Lost City area. There is no question but that the Southern Paiute were in the valley. Fay Perkins of Overton, one of the discoverers of Lost City, remembers the Paiute going into the valley to hunt mountain sheep and to gather seeds.

The pottery types identified from the Valley of Fire are listed by sites in Table 1.

TABLE 1

Pottery Types at Valley of Fire Sites

Types	Cl-192	Cl-193	Cl-194	Cl-195	Cl-196	Cl-197	Cl-198	Cl-199	Cl-200	Cl-201	Cl-202	Cl-203	Cl-207	Cl-208	Cl-209	Cl-210	Cl-211	Cl-213	Cl-214	Cl-215	Cl-216	Cl-217	Cl-218	Cl-223	Total
Tusayan Black-on-red																						1			1
North Creek Black-on-gray	9		2	3						13				4						1		3			35
St. George Black-on-gray	3			3							1			3											10
Boulder Black-on-gray	4	2																				1			7
Washington Gray	83	36	5	77	16	33	35			7		3	9	39						18		3	2		366
North Creek Gray	3	5		3			1															5			17
Kirkland Gray	2																								2
Boulder Gray	22								3	14		1	2	18					16	4		1			81
Moapa Gray	6	28	2	17																					53
Paria Gray				21																					21
Pyramid Gray	28	15	1	50				12					2	22	3		4			17		1	1		156
Deadman's Gray	6	11		3																		2			22
Snake Valley Gray														3											3
Lino Gray																					1				1
Shinarump Brown	1	2	1											6											10
Moapa Brown									1				1	3						4					9
Aquarius Brown																						1			1
Washington Corrugated	68	18	2		91			7	3				7	17					2	16		15			246
North Creek Corrugated				2																					2
Lower Colorado River Buff Ware		1		1																				2	4
Southern Paiute Brown Ware	25	15	8	3	16			1				1	1	12		9	31	5	1	2		13			143
Total:	260	133	20	275	32	33	36	20	7	34	1	5	22	127	3	9	35	5	19	62	1	46	3	2	1190

Petroglyphs

The petroglyphs recorded in the Valley of Fire contain a vast number of design elements corresponding to those which Steward (1929) has listed as being typical of the Great Basin. Both geometric and naturalistic designs are seen. The most popular naturalistic design elements are human and the mountain sheep. For design element descriptions, we are using the nomenclature found in Heizer and Baumhoff (1962: 73) "Prehistoric Rock Art of Nevada and Eastern California."

The meaning of the designs is impossible to determine exactly. Their lack of pattern makes it positive, however, that they do not represent a written language. Some of them may be examples of aboriginal doodling. Others may have a ceremonial significance. In particular Heizer and Baumhoff (1959, 1962) have noted a correlation between quadruped designs and ambush places on deer and antelope migration trails in west central Nevada. Many primitive hunting people practice imitative magic by drawing the animal they wish to kill. The many mountain sheep designs seem to indicate some sort of rite in which the picture of the sheep was drawn before the hunt. Some groups of designs look vaguely like maps. The designs do not however, seem to correspond obviously to nearby topographical features. If these designs are indeed maps they would have required the presence of someone to explain their meaning, and therefore have been of little or no value.

Many similar petroglyphs are found near Lost City. Here, too, the mountain sheep is a popular design.

The design elements noted in the Valley of Fire are listed in Table 2, and recorded at the sites present.

A comparison of petroglyph design elements of the Valley of Fire and the Red Rock Canyon area with similar ones at other Nevada sites is given in Table 3.

Typical design elements found in the Valley of Fire are shown in Plates 10-18.

Summary and Conclusions

The archaeological survey of the Valley of Fire, an area of proposed park addition disclosed an occupation in prehistoric times of almost 2,000 years, and that a number of different peoples made use of the area for a variety of reasons.

The number of people who could exist in the Valley of Fire at any one time was limited by the water supply, which was never large. There is no evidence of any permanent occupation in the valley. The typical site is the rockshelter campsite. We would doubt if more than 50 to 75 individuals were ever in the valley at the same time.

To judge by the distribution of the archaeological sites, the main areas of use were the central and southern portions of the valley, with the most extensive occupation on the margins of the Valley of Fire Wash.

While Anasazi people were the predominate users of the Valley of Fire, the pottery indicates that people from western and southern Utah, western and northern Arizona, and from the region below Hoover Dam were present in the valley from early times, and into historic times for some.

We have clear, positive evidence of people living in the Lost City area for at least 2,000 years and thereby use of the Valley of Fire for this length of time. The presence of Gypsum Cave nearby, and Stuart Rockshelter a few miles to the northwest, demonstrates that man has been in the general area for at least 10,000 years. While we did not find evidence of man in the Valley of Fire for longer than 2,000 years, that does not mean he was not there. Evidence of man at this date would be very slight, and easily destroyed. In the Valley of Fire such evidence could have easily been covered by erosion sediments or washed away.

The major users of the Valley of Fire area seem to have been the Lost City people. Lost City is an enormous cluster of pithouses and pueblo villages stretched along the lower course of the Muddy River. The culture has been assigned to the Virgin Branch of the Anasazi (Colton 1952; Gladwin 1934; Schroeder 1955; Shutler 1961).

From about 300 B.C. to A.D. 500 they were hunting game with the atlatl and dart, gathering wild seeds, living in round deep pithouses. Grass-lined storage cists and coiled basketry attributed to them have been found in caves and rockshelters in southern Nevada. This period of the Anasazi occupation of the Lost City area is called the Moapa Phase and equates with the Basketmaker II period of Arizona and New Mexico (Wormington 1959).

During the succeeding period, the Muddy River Phase, A.D. 500 to 700, corresponding to the Basketmaker III or Modified Basketmaker Period to the east, the pithouse dwellers gathered together in small villages. They learned to grow corn and squash on the river bottom lands and to make pottery vessels.

The Lost City Phase lasted from A.D. 700 to 1100 and corresponds to the Pueblo I and II, or Developmental Pueblo Period of the Anasazi. The population of the riverine villages had grown enormously. The people were living both in pithouses and in surface pueblos made of adobe and stone. They were also exploiting the mineral resources of the area, principally mining salt and turquoise. Sometime during this period the Southern Paiute had begun to push into Lost City territory.

The final period, Mesa House Phase, A.D. 1100 to 1150, early Pueblo III or Great Pueblo, was brief. The population dwindled, they moved their villages to high ridges away from the river and finally abandoned the area to the Southern Paiute. For a full description of the Lost City culture, see Shutler, 1961.

The Anasazi of southern Nevada did not confine themselves strictly to the Lost City area along the Muddy and Virgin rivers. Here their fields and permanent villages were located but hunting parties wandered far to the east, north, and south in search of game and wild vegetable food. Such hunting parties were the main users of the Valley of Fire area, probably in search of mountain sheep.

Not only hunting but trading took the Lost City Anasazi far from their villages. Pieces of traded pottery at Lost City indicate contact with other Virgin Branch people of Zion Canyon, with the Kayenta Branch people of northwestern Arizona, both Anasazi groups, and with the Patayan east of the Colorado and south along the lower Colorado River. Lost City sherds found in southern California and the presence of shells from the Pacific Ocean in Lost City sites show the extent of their trading operations.

Other people were also visiting the Lost City area on trading trips, probably to get salt and turquoise from the rich mines. The Patayan sherds found on campsites in the Valley of Fire possibly indicate the stopping places of trading parties on the way to the Lost City mines (Shutler 1961).

The Southern Paiute who entered southern Nevada during the Anasazi occupation, sometime between A.D. 700 and 1000, and who may have had something to do with the withdrawal of the Anasazi from the area were a nomadic people (op.cit.). Though they planted small fields of corn and squash, they left them during most of the year and wandered about hunting game and gathering wild vegetable food. They also used the Valley of Fire as a hunting area (Steward 1938).

THE RED ROCK CANYON AREA

The work in the Red Rock Canyon area was in the nature of a reconnaissance, and not as detailed as the survey of the Valley of Fire.

Geology

Red Rock Canyon, about 20 miles west of Las Vegas, owes its name to the thick, reddish sandstone that forms the steep valley walls near Willow Springs. From the east end of the canyon these cliffs, as much as 2,000 feet high, extend southward through several miles (Pl. 19, b). The same rock, known as the Aztec Sandstone, is prominent in ridges several miles east of Red Rock Canyon, in the vicinity of Red Spring (Pl. 20, d). Because of its high porosity and great thickness this rock is an exceptionally good acquifer. It feeds a number of good springs which no doubt were favorite camping sites of prehistoric men.

Except for the gravel and sand spread by running water on slopes and in washes, the Aztec Sandstone is the youngest rock formation in the immediate area. It is exposed in many parts of southern Nevada, and also in the Colorado Plateau from the vicinity of Zion Park eastward, where it is known as the Navaho Sandstone. The layers of sand in the formation record a desert climate that prevailed over a wide lowland during the Jurassic Period of geologic history, more than 150 million years ago. An earlier chapter in the history is told by layers of shale and sandstone that underlie the Aztec Sandstone a short distance north of Red Spring and also at the base of high cliffs south of Red Rock Canyon. These older deposits indicate, by the nature of the sediments and fossils of plants within them, a fairly moist climate in a lowland with wide stream valleys. One widespread formation in this sedimentary section, the Shinarump Conglomerate, contains abundant fossil tree trunks, some of large size.

Below these rock formations formed on an ancient land is a section of rocks, many thousands of feet thick, made up of limestone and related materials that were laid down on the floors of seas during a vast lapse of time. The youngest of these formations of marine origin are well exposed on the backslope and in the steep front of Blue Diamond Hill, the ridge extending southward from the Red Rock Canyon road to the village of Blue Diamond. Layers of gypsum, quarried at the Blue Diamond mine, lie between beds of limestone that contain abundant fossil forms of extinct shell fish. Still older formations of marine limestone and dolomite underlie the Spring Mountains, of which the highest point, Charleston Peak, is at an altitude nearly 12,000 feet. A number of superimposed formations in this range, all yielding distinctive marine fossils, hold a record of the vast lapse of time extending from about 500 million to 200 million years ago.

The thick section of sedimentary rocks, laid down in nearly horizontal layers, is now tilted at various angles up to the vertical. This deformation records mountain-making movements that affected the Rocky Mountain belt, starting about 100 million years ago and recurring through several episodes. One effect of the strong deformation is clearly visible along the road extending from near Willow Spring to the summit east of Lovell Canyon. The Aztec Sandstone, inclined gently westward in the cliffs at the east front of the range, is bent upward past the vertical northeast of Willow Spring, and the oldest formation in the marine carbonate section has moved across the overturned beds. From Red Rock Canyon southward the dark limestone of Cambrian age overlies the Aztec Sandstone, as a result of thrust faulting. In this anomalous relation, the rocks seen at the top of the section are about 250 million years older than the sandstone directly beneath.

The great thrust fault, known as the Keystone thrust, is fairly regular south of Red Rock Canyon, but much more complicated toward the northeast. Under torsional strain the thrust mass was broken into large blocks, which were strongly tilted and overridden as the plate of older rock continued to move eastward. One of the tilted blocks is exposed near Red Spring. The Aztec Sandstone in this block has contrasting colors, ranging from brick-red to nearly white. This has resulted from removal of iron oxide by solutions that circulated along the faults.

Erosion through a long period of time since the strong crustal movements occurred has fashioned the landscape as we now see it.

Ecology

Most of the land in the Red Rock Canyon region usable for recreation purposes is in the Lower Sonoran life-zone. La Madre Mountain and the Spring Mountains are within the proposed State Park boundaries. Here elevations of over 7,500 feet are reached. This places a small portion of the area in the Boreal Zone. But most of the Boreal region is very difficult of access. The flora-fauna associations of the Lower Sonoran life-zone are outlined in the Valley of Fire area report. The Red Rock Canyon area has a greater incidence of Yucca and Agave than does the Valley of Fire. This is because the usable land elevations of the Red Rock Canyon area are slightly higher than those of the Valley of Fire, and approach the upper limits of the Lower Sonoran life-zone. The presence of these useful plants probably constitutes the principal reason for Indian occupation of this region. Mescal pits (shallow, circular depressions, the remains of earth ovens where the core of the Agave stem was roasted) are prevalent here. Pinyon nuts are available in the area at higher elevations.

Water is more available in the Red Rock Canyon area than in the Valley of Fire. There are still many active springs in the area (Pl. 21, a). The higher elevations of the Red Rock Canyon area would have made summer occupation more pleasant than in the Valley of Fire.

Archaeological Sites

The characteristic archaeological sites in the survey area are petroglyphs, mescal pits, campsites, or combinations of the three. Eighteen sites were recorded (Cl-224-Cl-241 of the Nevada State Museum site numbering system). Of these, six had pottery and artifacts, or flaking debris; four of these are rockshelters (Cl-227, Cl-231, Cl-228, Cl-238); three are isolated petroglyphs; seven are mescal pits; one site has petroglyphs and a mescal pit, and one with pictographs, petroglyphs and a mescal pit (Cl-233, Pl.22, d). General site locations are recorded on map 2.

We found no evidence of any pithouse or surface structures within the proposed park boundaries indicating that the Anasazi at least, made only short trips to the area, probably hunting and gathering parties. All sites are located near present, or formerly available, water sources. Without exception, the mescal pits are located in a position that commands a view of the surrounding area. It is not known what significance, if any, this fact may have. There are undoubtedly many more mescal pits in the region than were recorded on the short reconnaissance. The use of mescal pits will be discussed at length below. The heaviest concentration of sites is in Brown Stone Canyon, located about four miles north of Red Rock Canyon. This canyon was named by us for the large outcrop of brown rock at the head of the canyon. The large number of petroglyphs and pictographs in this canyon suggest the possibility that it was a ceremonial center. Sites were recorded in all but the highest elevation areas of the Red Rock Canyon region.

Compared to the Valley of Fire area, very little cultural material was recovered. However, the pottery found indicates that the Anasazi from the lower Virgin and Muddy rivers, the Upland Patayan from east of the Colorado River, the Lowland Patayan from below Hoover Dam, and the Southern Paiute visited the area between about A.D. 700 and historic times. It is difficult to determine from the small pottery and artifact sample just which group were the principal users of the land in this area.

Several factors were responsible for drawing Indians to the Red Rock Canyon area over a long span of time. The Yucca growing in abundance in this region would have provided both food and raw materials for such things as cordage, string, sandals and combs. The Agave, an important item to the Indian as food, as evidenced by the many mescal pits, and the fibers from its leaves were also used as manufacturing material. The presence of grinding implements indicates seeds were gathered and ground. Pinyon nuts could have been gathered in the higher elevations in the fall. Game such as rabbits, cottontail, squirrels, deer, and mountain sheep were no doubt hunted. As opposed to the Valley of Fire, where many petroglyphs representing mountain sheep were noted, only one possible one was seen in the Red Rock Canyon area. The scarcity of archaeological remains in the Red Rock Canyon area and the lack of many types of foreign sherds compared to the Valley of Fire is probably a function of the area's remoteness from aboriginal population centers and trade routes.

Typical archaeological sites, geological formations, mescal pits, and scenic views are shown in Plates 19-23.

MATERIAL CULTURE

Stone Implements

Few stone artifacts were recovered from the sites in the Red Rock Canyon area. A few manos, choppers, scrapers, blades and flake knives were collected, in addition flaking debris of chips and flakes indicating that tools were made on the spot. No complete, diagnostic projectile points were found. The nondescript nature of these tools makes it impossible to assign them to any definite culture.

It is possible to glean certain information from the stone tools. The presence of grinding implements such as manos indicates that seeds or pinyon nuts were collected and ground. The blades, scrapers and choppers are tools which would have been used in the butchering of animals and preparation of hides.

Manos

Cl-224. 1. Two specimens: one-hand, uniface, edges used as a hammerstone. Plate 5, b, mat. sandstone, lg. 13.0, wd. 10.1, th. 4.1 cm.

2. Fragment, one-hand, bifacial, mat. sandstone. Plate 6, b.

Cl-238. One-hand, biface, rectangular shape, ends rounded. Plate 5, a (Shutler 1961: Pl. 59, a), lg. 12.3, wd. 7.9, th. 3.7 cm.

Flake Knives

Cl-227. One edge bifacially trimmed to form a working edge, no retouch, other edges show use, mat. chert. Plate 3, g, lg. 4.4, wd. 2.7, th. 1.2 cm.

Cl-238. 1. Three specimens: one edge bifacially trimmed to form a working edge, no retouch, mat. chert. Plate 3, h, lg. 4.2, wd. 2.6, th. 1.0 cm.

2. Fragment, edges bifacially trimmed to form working edges, surfaces worked, mat. chert. Plate 2, h.

3. Fragment, base convex, sides straight, surfaces worked, mat. chert, wd. 2.5, th. 0.8 cm.

Chopper

Cl-224. Small angular cobble, edges bifacially trimmed by percussion to form a working edge, no retouch. Plate 6, a, lg. 5.9, wd. 6.5, th. 3.2 cm., mat. limestone.

Hammerstones

Cl-224.	Rounded cobble, some intentional shaping by percussion. (Shutler 1961: Pl. 63, c), lg. 7.8, wd. 6.8, th. 4.0 cm.
Cl-227.	Small angular cobble, no intentional shaping, edges show use as a hammerstone. Plate 6, c, lg. 7.7, wd. 7.3, th. 4.8 cm.

Pecking Stone

Cl-233.	Large rounded, angular cobble, no trimming or retouch. Edges show pecking from use. This tool is ideally shaped to peck petroglyphs, which are found at this site. Plate 5, c, lg. 14.4, wd. 11.3, th. 6.2 cm.

Worked Vesicular Basalt

Cl-238.	Incipient effigy? Plate 6, d, lg. 8.7, wd. 3.9, th. 3.1 cm.

Pottery

All the pottery types found in the Red Rock Canyon area have been described in various publications (Baldwin 1952; Colton 1952, 1958; Schroeder 1955). The potsherd collection is too small to provide conclusive cultural and temporal placements for the sites. Of the five sites that yielded pottery one had Anasazi, Upland Patayan (east of the Colorado River) and Lowland Patayan (lower Colorado River), and Southern Paiute pottery. Two sites had both Lowland Patayan and Southern Paiute pottery. One site had only Lowland Patayan pottery, and one site had only Southern Paiute Brown Ware.

The Anasazi sherds represent a time span from about A.D. 500 to 1150: Boulder Gray, Boulder Black-on-gray, North Creek Gray, Washington Black-on-gray, Washington Corrugated, and Shinarump Brown. The Upland Patayan culture is represented by only one Aquarius Brown sherd, the Lowland Patayan by Pyramid Gray and other unidentified Lower Colorado River Buff Ware sherds. These pottery types were made from about A.D. 900 into the 19th century. Southern Paiute Brown Ware was introduced into southern Nevada somewhere between A.D. 700 and 1100 and was made until the 20th Century.

The pottery types identified from the Red Rock Canyon area are listed in Table 4.

Mescal Pits

The numerous mescal pits for roasting Agave in the Red Rock Canyon area have been noted. Some of these pits are so large as to be visible from low flying airplanes. As mentioned above, these pits are invariably located in positions commanding a view of the region below the pit. The mescal pits recorded ranged in size from six feet inside diameter and 15 feet outside diameter, to 21 feet inside diameter and 27 feet outside diameter, and 30 inches deep. Erosion has obscured the original depth of many of the pits. For typical mescal pits see Pls. 20, b - c; 21, b, d; 22, b - d; 23, a - c.

Henderson (1951: 8) describes a mescal roast by the Pai-Pai Indians of Baja California. Presumably this is the same method used by the prehistoric Indians of southern Nevada.

> "The plant used is Agave deserti, commonly known as the century plant, and grows in the Upper Sonoran and Transitional life-zones, between 1500 and 5000 feet elevation.
>
> In April or May, depending on the altitude, the plant sends up a huge bud, which becomes a flower stock from six to 10 feet in height. After flowering, the plant dies.
>
> A sharpened stick is used to gouge the bud out of its roseate of thorn-rimmed blades. When the bud is prepared for roasting, the edible lower part resembles a big pineapple.
>
> A pit two and one-half feet deep and three feet wide was excavated and lined with rocks. A wood fire was built in the hole and kept burning until the rocks were well heated. The bud(s) was placed on the bed of coals. Then more hot rocks were heaped on top, and the roast covered with several inches of earth.
>
> Twelve hours later the pit was opened, and the charred bud removed. Well cooked, its color and consistency is about that of southern cooked yams - and it has much the same flavor."

Carter and Ferris describe a mescal roast in the Gabilan area of Baja California which is a variation of that described above (n.d.: 21-22).

> "Nearby were four Agave 'hearts' with the leaves all trimmed off. ...the men moved most of the coals aside to make a pit, put the agaves in the middle, pushed the coals over them, built up a mound of gravel and started a new fire on top.
>
> '...Carlos and Franco used my trench pick to dig out the four roasted Agave hearts which had been burned Sunday evening. They were still steaming and beautifully cooked without appearing to have burned. They were set aside to cool while we broke camp.'

'One Agave heart was cut longitudinally and we all ate slices from the middle. It was tender and surprisingly tender and sweet. This is the first stage of making tequila. Next, one chops and mashes the cooked agave in order to get out the juice. Then the juice is allowed to ferment to the desired stage.'"

Gifford (1932) describes the use of mescal (Agave) by the Southeastern Yavapai. The mescal leaves were sawed off with a mescal knife. These knives are found archaeologically in southern Nevada, presumedly used for the same purpose. A mescal knife is pictured in Baldwin, 1944. This specimen has a metal blade, indicating historic influence. Prehistoric specimens have been recovered with stone blades.

A diggingstick was used to dig an oval pit, three feet deep, and six or more feet in diameter. A fire was built and stones heated red hot. Mescal "cabbages" were piled on hot stones, covered with brush or grass and earth put over them. The mescal was cooked for two nights and a day. When taken out of the fire, the mescal was placed on a metate and beaten with a pounder shaped somewhat like a mescal knife, but with a blunt edge. This hammering broke down the fibers and prepared the material for drying. The Southeastern Yavapai dried most of their mescal. When used a piece was cut off, and soaked in a basket of water. It was chewed to extract the nutriment and the fibers were spat out.

Gifford (1936) reports that the Northeastern and Western Yavapai roasted mescal and prepared roasted buds for drying much the same way as did the Eastern Yavapai, with pits 10 to 12 feet in diameter.

Petroglyphs

The petroglyphs of the Red Rock Canyon area contain numerous design elements. As in the Valley of Fire these elements correspond to those which Steward (1929) has listed as being typical of the Great Basin. Both geometric and naturalistic designs are present. In substance, the geometric design elements are similar to those found in the Valley of Fire (see Valley of Fire petroglyph section). As in the Valley of Fire, naturalistic design elements are seen, but they are mainly anthropomorphic. Hand and foot prints, and human figures are most popular. Mountain sheep glyphs, so numerous in the Valley of Fire were not seen. A few round shield-like designs reminiscent of Fremont petroglyph designs were noted. The possible meaning of the petroglyphs of the southern Nevada region is discussed in the Valley of Fire survey report. Site Cl-233, in Brown Stone Canyon, has numerous multi-colored pictographs. These design elements are both geometric and naturalistic.

Design elements noted at Red Rock Canyon area sites are listed in Table 5. Typical petroglyph and pictograph design elements found at Red Rock Canyon area sites are shown in Plates 24 - 35.

Summary

The archaeological reconnaissance of the Red Rock Canyon area produced a very small sample of cultural material. The pottery recovered indicates the area has been used by man for some 1,500 years. The Anasazi people from Lost City, Upland Patayan from east of the Colorado River, the Lowland Patayan people from below the present Hoover Dam, and the Southern Paiute Indians occupied this area.

The lack of architectural features, the shallow deposit of the campsites and their scarcity indicate that this occupation was sporadic and temporary. The vegetable products of the area, especially yucca, agave, and pinyon were probably the main attractions. The petroglyphs, showing few animal forms do not suggest the great emphasis on hunting assumed for the aboriginal use of the Valley of Fire. The number of petroglyphs hint at a possible ceremonial use of the area. Brown Stone Canyon had the greatest concentration of archaeological remains and was probably the most frequently visited section of the region.

Table 2

VALLEY OF FIRE PETROGLYPH SITES

Design Elements Cl-	192	194	199	200	202	203	204	205	206	207	208	210	211	215
Circle	X	X		X	X	X	X		X	X				X
Concentric circles		X		X		X	X	X	X	X		X		X
Bisected circle	X		X			X	X			X		X	X	
Sectioned circle					X	X								
Spoked concentric circles							X			X				
Tailed circle	X	X		X	X	X	X		X	X		X		X
Circle and dot						X	X		X	X				
Circle cluster						X	X			X				
Connected circles	X	X				X	X	X		X	X		X	X
Chain of circles	X	X		X		X	X		X	X			X	X
Sun disc	X	X		X		X	X	X	X	X				
Spiral	X	X	X	X		X	X	X		X			X	X
Curvilinear meander	X	X	X	X		X	X			X		X	X	
Convoluted rake						X	X							X
Connected dots			X	X				X		X				
Dumbell		X					X			X				X
Dots or dot design	X		X	X		X	X		X	X		X	X	X
Wavy lines	X	X		X	X	X	X	X	X	X	X	X	X	X
Deer hoof						X								
Oval grid						X	X			X				
Rectangular grid						X	X		X				X	
Cross	X					X	X	X	X	X				X
Bird track				X		X				X		X		X
Parallel straight lines		X				X				X				
Triangles	X									X				
Lozenge chain						X								
Zig zag lines						X	X		X					
Star						X				X		X		
Ladder, one pole		X				X	X	X	X	X			X	X
Ladder, two poles				X			X			X			X	X
Rake	X	X		X		X	X		X	X			X	X
Rectilinear meander										X			X	
Chevron						X	X							
Radiating dashes												X		
Crosshatching		X				X	X			X	X	X		
Plant form	X					X	X			X		X		
Bird						X								
Lizard			X		X	X				X				
Mountain sheep	X	X	X	X		X	X	X	X	X			X	X
Sheep horns		X					X			X				
Quadruped	X	X	X	X		X	X	X	X	X				X
Snake						X				X				
Many-legged insect			X			X								
Foot or paw		X		X		X	X			X		X	X	
Hand							X			X		X		
Human	X	X			X	X	X			X		X		
Horned human						X	X			X				
Human stick figure	X			X	X	X	X	X		X		X		
Human, stick limbs		X		X		X	X	X	X	X			X	
Katchina						X	X			X				X
White man	X	X				X	X			X				
Atlatl										X				
Deer	X					X	X			X				

TABLE 3

COMPARISON OF DESIGN ELEMENTS WITH OTHER AREAS OF NEVADA

		Ch-3	Ch-16	Ch-20	Ch-26	Ch-49	Ch-55	Ch-57	Ch-71	Ch-95	Cl-1	Cl-2	Cl-3	Cl-4	Cl-5	Cl-7	Cl-9	Cl-123	Cl-124	Cl-131	Cl-143	Cl-145	Cl-146	El-23	Es-1	Hu-5	La-1	La-9	Li-1	Li-3	Li-5	Ly-1	Ly-2	Ly-5	Ly-7	Mi-2	Mi-3	Mi-4	Mi-5	Mi-13	Mi-14	Mi-17	Ny-2	Ny-3	Ny-22	Ny-25	Ny-29	Ny-44	Pe-10	Pe-14	Pe-27	Pe-36	Pe-59	St-1	Wa-5	Wa-7	Wa-26	Wa-29	Wa-35	Wa-67	Wa-68	Wa-69	Wa-131	Wa-135	Wa-137	Wa-139	Wa-142	Wh-3	Wh-11	Wh-12	Wh-13	Wh-14	Wh-15
Circle	x,o	X					X	X	X		X	X	X	X		X	X	X		X		X	X	X	X		X	X				X	X	X	X	X	X	X	X	X	X	X		X	X				X	X		X		X	X				X	X		X	X		X	X	X			X		X	
Concentric circles	x,o	X					X	X	X		X			X	X	X		X			X		X			X	X					X		X	X			X			X			X		X			X				X	X	X	X		X			X	X			X						X	
Bisected circle	x,o	X					X		X		X	X		X	X	X		X				X						X	X			X	X		X			X	X	X			X					X	X									X			X	X		X								
Sectioned circle	x,o																																					X	X																										X										
Spoked concentric circle	x,o			X							X																			X							X		X	X																				X				X											
Tailed circle	x,o	X	X			X			X		X	X	X	X		X		X		X		X		X			X	X	X			X	X		X	X		X					X					X	X				X	X		X		X			X	X		X	X	X					X	
Circle and dot	o	X					X	X	X		X	X		X						X		X		X			X					X	X		X	X		X					X												X				X		X	X	X										
Circle cluster	x,o	X							X				X	X	X			X				X		X								X						X											X					X			X				X												
Connected circles	x,o	X							X		X	X		X	X	X	X					X		X		X	X	X				X	X		X	X		X		X			X						X	X		X	X	X	X	X		X				X	X			X	X		X				
Chain of circles	x,o	X	X						X		X		X	X				X	X			X		X			X	X				X	X	X	X			X						X					X					X	X			X	X			X	X		X							X	
Sun disc	x,o	X					X		X		X	X			X			X		X		X				X	X	X				X			X		X	X	X													X				X	X		X	X					X		X			X	
Spiral	o	X							X		X				X							X	X			X					X	X		X	X			X					X													X	X																			X	
Curvilinear meander	x,o	X	X	X				X	X	X	X	X	X	X		X					X	X			X		X	X		X		X	X		X	X	X	X	X				X	X		X	X	X	X	X		X		X	X	X		X	X		X	X	X	X	X		X	X	X	X		X	
Convoluted rake	x,o	X							X																															X																													X					X	
Connected dots	x,o																				X						X						X						X								X																					X					X						
Dumbell	x,o								X		X																						X																							X																								
Dots	x,o	X					X		X		X			X	X	X		X	X	X		X		X			X					X	X					X														X	X				X			X	X		X	X	X						
Wavy lines	x,o	X			X	X		X	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X			X	X		X		X	X		X	X		X	X		X		X	X		X	X	X			X			X	X			X				
Deer hoof	o							X																	X		X	X				X						X																																				
Oval grid	x,o										X		X	X		X		X		X		X					X	X				X	X		X			X	X					X		X				X				X	X	X		X				X	X					X				
Rectangular grid	x,o	X	X					X	X		X	X	X	X	X			X		X		X						X				X			X			X		X																X	X			X	X			X						X				
Blocked oval	x																				X																																					X																							
Cross	x,o								X		X	X		X						X		X					X					X															X												X							X			X								
Bird tracks	x,o	X					X				X												X						X				X			X			X																								X	X		X		X			X										
Parallel straight lines=	x,o	X	X						X		X	X		X						X		X				X	X	X		X		X	X		X	X	X	X	X	X			X						X			X	X				X		X	X			X			X	X			X	X
Triangles	x,o	X									X												X										X						X																X					X		X												
Lozenge chain	o						X						X										X										X																			X																									
Zig zag lines	x,o	X					X		X		X									X		X										X				X	X	X					X						X					X	X	X			X			X			X	X							
Star	x,o	X	X										X		X				X																			X	X		X			X	X						X										X													X										
Ladder, one pole	x,o	X						X			X		X							X			X						X						X						X	X					X						X									X												
Ladder, two poles	x,o	X							X		X									X						X				X						X								X												X							X	X										
Rake	x,o	X				X		X	X		X	X		X	X			X	X	X		X	X		X	X	X	X		X		X	X		X			X	X	X			X		X		X	X	X			X		X	X			X		X		X	X		X	
Rain symbol	x										X						X																																																																					
Rectilinear meander	x,o	X							X		X	X																				X																		X			X								X										
Chevrons	x,o										X				X												X																					X																															
Radiating dashes	x,o																										X	X		X									X																											X										
Crosshatching	x,o	X				X					X	X		X	X			X				X					X	X				X	X	X				X	X					X					X					X	X				X			X									
Plant form	x,o	X							X		X			X			X			X		X					X		X			X	X		X			X	X																	X				X	X			X							X				
Bird	o																						X																															X																									
Lizard	o	X					X				X		X					X															X																					X																									
Mountain sheep	o								X		X	X	X	X	X			X		X	X	X							X			X									X											X				X			X	X				X												
Sheep horns	x,o								X		X		X	X	X																X					X			X																								X	X																			
Quadruped	x,o								X		X			X	X			X	X			X																																										X										X						X			X	X	
Snake	o	X	X	X			X		X		X			X		X				X	X	X	X			X		X		X		X	X	X	X	X		X	X		X		X	X		X			X					X	X		X	X	X		X	X	X										
Many-legged insect	x,o				X				X		X	X			X							X				X						X						X																																X				X	X		X				X	
Foot or paw	x,o						X				X				X	X		X		X			X					X					X			X			X																			X					X				X											
Hand	o										X	X	X	X	X	X				X		X					X	X				X			X						X													X					X				X											
Human	x,o						X		X		X			X	X	X	X	X	X			X	X									X						X																	X	X				X	X		X										X	
Horned human	x,o								X		X				X	X		X	X		X	X										X										X							X																													
Human stick figure	x,o	X	X				X	X	X		X	X		X	X		X	X		X	X	X					X					X			X	X		X	X		X													X	X		X		X			X	X	X	X	X			X			X	
Human stick limbs	x,o	X												X							X	X										X			X			X																			X							X			X								
Katchina	o										X	X		X		X						X									X	X																																										X		X	X	X	X
White man	o ||||||||||||||X|																																																																												
Atlatl	o ||||||||||X|																																																																														
Deer	o														X	X							X																																																																		

x - Red Rock Canyon

O - Valley of Fire

X - Present at site

TABLE 4

POTTERY TYPES FROM RED ROCK CANYON AREA SITES

Pottery Types	Sites Cl-224	Cl-227	Cl-228	Cl-231	Cl-238	Total
Washington Black-on-gray	1					1
Boulder Black-on-gray	1					1
North Creek Gray	1					1
Boulder Gray	3					3
Pyramid Gray	17	1		9	63	90
Shinarump Brown	2					2
Aquarius Brown	1				1	2
Washington Corrugated	3					3
Lower Colorado River Buff Ware				6		6
Southern Paiute Brown Ware	15		1	5	22	43
TOTAL:	44	1	1	20	86	152

Table 5

RED ROCK CANYON AREA PETROGLYPH SITES

Design Elements	C1-224	C1-232	C1-233	C1-234	C1-236	C1-241
Circle		X	*	X	X	X
Concentric circles		X		X		X
Bisected circle	X	X	X	X	X	X
Sectioned circle					X	X
Spoked concentric circles						X
Tailed circle		X	X *	X	X	X
Circle cluster	X				X	
Connected circles	X	X	X *	X	X	X
Chain of circles	X	X	X *	X	X	X
Sun disc						X
Curvilinear meander	X	X	*	X	X	X
Convoluted rake			*		X	
Connected dots				X		
Dumbell			X *		X	
Dots or dot design	X		X *	X	X	
Wavy lines	X		X *	X	X	
Oval grid			X	X		X
Rectangular grid	X		*	X		
Blocked oval			*	X		
Cross		X	X *			
Bird track		X	X *			
Parallel striaght lines	X	X	X *	X	X	
Triangles	X	X		X	X	
Zig zag lines		X	*			
Star		X	*			
Ladder, one pole	X	X	*		X	X
Ladder, two poles			*		X	
Rake	X	X	X *	X	X	X
Rain symbol		X				
Rectangular meander			X		X	
Chevron			*			
Radiating dashes			*			
Crosshatching	X		X *	X	X	
Plant form	X	X	X *	X		X
Sheep horns						X
Quadruped			X			
Many-legged insect	X	X	*			
Foot or paw			*		X	
Human		X	*			X
Horned human			*			
Human stick figure		X	*	X		
Human stick limbs		X	*			

X Petroglyphs
* Pictographs

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EXPLANATION OF PLATES

For the photos illustrating petroglyphs, Plates 10-18, 24-35, the design elements noted for each are listed in the Explanation of Plates.

Plate 1. Artifacts from the Valley of Fire. a, mano, Cl-195; b, mano, Cl-200; c, mano, Cl-195; d, hammerstone, Cl-195.

Plate 2. Artifacts from the Valley of Fire and Red Rock Canyon areas. a, triangular, side-notched projectile point, Cl-192; b-c, triangular, side-notched projectile points, Cl-214; d, straight base, serrated sides projectile point, Cl-201; e, Basketmaker III projectile point; f-h, k, flake knives, Cl-192, Cl-200, Cl-238, Cl-214; i, end scraper, Cl-209; j, thumbnail scraper, Cl-214.

Plate 3. Artifacts from the Valley of Fire and Red Rock Canyon areas. a-c, e-h, flake knives, Cl-214, Cl-195, Cl-208, Cl-207, Cl-213, Cl-227, Cl-238; d, end scraper, Cl-194.

Plate 4. Artifacts from the Valley of Fire. a, plano-convex scraper, Cl-195; b, chopper, Cl-195; c, rubbing-hammerstone, Cl-208; d, chopper, Cl-233.

Plate 5. Artifacts from Red Rock Canyon area. a, mano, Cl-238; b, mano, Cl-224; c, pecking stone, Cl-233.

Plate 6. Artifacts from Red Rock Canyon area. a, chopper, Cl-224; b, mano, Cl-224; c, hammerstone, Cl-227; d, incipient effigy?, Cl-238.

Plate 7. Valley of Fire archaeological sites. a, Cl-192, rockshelter, note petroglyphs; b, Cl-193, rockshelter; c, Cl-194, rockshelter; d, Cl-195, rockshelter.

Plate 8. Valley of Fire archaeological sites. a, Cl-196, erosion hole in rock; b, Cl-197, erosion hole in rock; c, Cl-199, rockshelter; d, Cl-200, rockshelter.

Plate 9. Valley of Fire archaeological sites. *a*, Cl-201, rockshelter; *b*, Cl-203, rockshelter; *c*, Cl-205, petroglyphs; *d*, Cl-216, rockshelter.

Plate 10. Valley of Fire petroglyphs. *a*, Cl-192, circle, bisected circle, tailed circle, connected circles, sun disc, rake, mountain sheep; *b*, Cl-192, circle, bisected circle, sun disc, dots or dot design, plant form, quadruped; *c*, Cl-194, tailed circle, spiral, dumbell, rake, human, horned human; *d*, Cl-194, connected circles, sun disc, spiral, parallel straight lines, rake, mountain sheep, sheep horns, foot, human stick limbs.

Plate 11. Valley of Fire petroglyphs. *a*, Cl-199, spiral, curvilinear meander, connected dots, lizard, mountain sheep, quadruped, many-legged insect; *b*, Cl-200, concentric circles, tailed circle, spiral, connected dots, bird tracks, rake, human stick figure; *c*, Cl-202, circle, tailed circle, wavy lines, parallel straight lines; *d*, Cl-202, sectioned circle, lizard, human stick figure.

Plate 12. Valley of Fire petroglyphs. *a*, Cl-203, concentric circles, connected circles, sun disc, dots or dot designs, human stick figure; *b*, Cl-203, connected circles, sun disc, dots or dot designs, wavy lines, oval grid, quadruped, foot; *c*, Cl-203, circle, concentric circles, bisected circle, sun disc, wavy lines, bird, foot, human; *d*, Cl-203, circle, concentric circles, bisected circle, tailed circle, connected circles, chain of circles, sun disc, spiral, wavy lines, deer hoof, rectangular grid, rake, lizard, mountain sheep, human stick figure, katchina, deer.

Plate 13. Valley of Fire petroglyphs. *a*, Cl-203, circle, concentric circles, connected circles, convoluted rake, dots or dot designs, ladder- 1 pole,

rake, quadruped, many-legged insect, foot, human, horned human, human stick limbs, katchina; b, Cl-203, circle, connected circles, convoluted rake, dots or dot designs, cross, ladder- 1 pole, rake, quadruped, many-legged insect, foot, horned human, human stick limbs, katchina; c, Cl-203, circle, concentric circles, bisected circle, tailed circle, connected circles, chain of circles, spirals, sun disc, rectangular grid, rake, lizard, mountain sheep, human stick figure, katchina, wavy lines, deer hoof, deer; d, Cl-203, concentric circles, convoluted rake, chevrons, foot, human, horned human, human stick limbs, katchina.

Plate 14. Valley of Fire petroglyphs. a, Cl-204, bisected circle, tailed circle, chain of circles, dots or dot designs, wavy lines, ladder -1 pole, rake, crosshatching, quadruped, deer; b, Cl-204, connected circles, rectangular grid, rake; c, Cl-204, circle, tailed circle, connected circles, sun disc, rectangular grid, ladder - 1 pole, mountain sheep, foot, human stick figure; d, Cl-204, circle, tailed circle, connected circles, curvilinear meander, rake, crosshatching, foot, human stick limbs.

Plate 15. Valley of Fire petroglyphs. a, Cl-204, circle, concentric circles, spiral, curvilinear meanders, dots or dot designs, wavy lines, cross, ladder -1 pole, rake, human stick figure; b, Cl-204, sun disc; c, Cl-204, ladder - 2 poles, deer; d, Cl-204, circle, bisected circle, spoked concentric circles, tailed circle, connected circles, chain of circles, dots or dot designs, wavy lines, rake, chevrons, sheep horns, hand, human stick figure.

Plate 16. Valley of Fire petroglyphs. a, Cl-204, circle, tailed circle, connected

circles, wavy lines, ladder-1 pole, rake; *b*, Cl-204, quadruped, deer; *c*, Cl-204, spoked concentric circles, tailed circle, circle cluster, wavy lines, rake; *d*, Cl-204, spoked concentric circles, tailed circle, connected circles, chain of circles, dots or dot designs, wavy lines, ladder-1 pole, rake, chevrons, sheep horns, hand, human stick figure.

Plate 17. Valley of Fire petroglyphs. *a*, Cl-204, concentric circles, connected circles, curvilinear meanders, dots or dot designs, rake, mountain sheep, quadruped, many-legged insect, human stick figure; *b*, Cl-204, sectional circle, circle cluster, connected circles, wavy lines, rake; *c*, Cl-205, connected circles, sun disc, wavy lines, cross, mountain sheep, human stick figure; *d*, Cl-205, connected circles, sun disc, wavy lines, ladder-1 pole, human stick figure.

Plate 18. Valley of Fire petroglyphs. *a*, Cl-206, wavy lines; *b*, Cl-206, concentric circles, sun disc, dots or dot designs, rake, mountain sheep; *c*, Cl-206, chain of circles, wavy lines; *d*, Cl-206, concentric circles, wavy lines, ladder-1 pole, human stick figure.

Plate 19. Red Rock Canyon area scenic photographs. *a*, view looking east from top of Old Red Mountain; *b*, view looking south from Red Rock Canyon; *c*, Turtle Head Mesa north of Little Red Rock Canyon; *d*, cliffs west of Cl-225, White Rock Spring.

Plate 20. Red Rock Canyon area photo and sites. *a*, lake on top of Old Red Mountain; *b*, mescal pit across from Cl-233; *c*, mescal pit across from Cl-234; *d*, Cl-224, Little Red Rock Canyon.

Plate 21. Red Rock Canyon area sites. *a*, Cl-225, White Rock Spring; *b*, Cl-226,

mescal pit; *c*, Cl-227, rockshelter; *d*, Cl-230, mescal pit.

Plate 22. Red Rock Canyon area sites. *a*-*b*, Cl-231, rickshelter; *c*, Cl-232, mescal pit;

Plate 23. Red Rock Canyon area sites. *a*, Cl-235, mescal pit; *b*, Cl-237, mescal pit; *c*-*d*, Cl-238, rockshelter and mescal pit.

Plate 24. Red Rock Canyon area sites and petroglyphs. *a*, Cl-239, mescal pit; *b*, Cl-224, connected circles, dots or dot designs, rectangular grid, parallel straight lines; *c*, Cl-224, ladder - 1 pole; *d*, Cl-224, curvilinear meander, rake.

Plate 25. Red Rock Canyon area petroglyphs. *a*, Cl-224, connected circles; *b*, Cl-224, chain of circles, wavy lines, rake; *c*, Cl-224, curvilinear meander, crosshatching, *d*, Cl-224, bisected circle, connected circles, triangles, crosshatching.

Plate 26. Red Rock Canyon area petroglyphs. *a*, Cl-224, bisected circle, connected circles; *b*, Cl-224, connected circles; *c*, Cl-224, many-legged insect; *d*, Cl-224, dots or dot designs, rake.

Plate 27. Red Rock Canyon area petroglyphs. *a*, Cl-232, bisected circle, bird track, ladder - 1 pole, rain symbol; *b*, Cl-232, tailed circle, curvilinear meander, rake, human, human stick limbs; *c*, Cl-232, tailed circle, chain of circles, parallel straight lines, ladder - 1 pole, rake, human, human stickfigure, human, stick limbs; *d*, Cl-232, ladder - 1 pole, rake, human stick figure.

Plate 28. Red Rock Canyon area petroglyphs. *a*, Cl-232, circle, concentric circles, triangle, rake, wavy-legged insect; *b*, Cl-232, concentric circle,

connected circles, wavy lines, ladder - 1 pole, rain symbol; *c*, Cl-233, circle, tailed circle, connected circles, convoluted rake, dots or dot designs, bird track, zig-zag lines, chevrons, plant form, wavy-legged insect; *d*, Cl-233, concentric circle, chain of circles, oval grid, parallel straight lines, rectangular meander.

Plate 29. Red Rock Canyon area petroglyphs. *a*, Cl-233, concentric circle, bisected circle, cross, parallel straight lines, rake, crosshatching, plant form; *b*, Cl-233, connected circles, dots or dot designs; *c*, Cl-233, connected circles, chain of circles, dumbell, plant form; *d*, Cl-233, rake, quadruped.

Plate 30. Red Rock Canyon area petroglyphs and pictographs. *a*, Cl-233, bisected circle, connected circles, dots or dot designs, cross, parallel straight lines, rake, crosshatching, plant form; *b*, Cl-233, connected circles, chain of circles, wavy lines; *c*, Cl-233, dots or dot designs, zig-zag lines, rake; *d*, Cl-233, dots or dot designs, ladder - 1 pole, foot or paw.

Plate 31. Red Rock Canyon area petroglyphs and pictographs. *a*, Cl-233, dots or dot designs, rectangular grid, blocked grid, parallel straight lines, rake, radiating dashes; *b*, Cl-233, tailed circle, connected circles, zig-zag lines, rake, human stick limbs; *c*, Cl-233, connected circles, chain of circles, dumbell, cross, bird track, parallel straight lines, zig-azg lines, rake, human stick limbs; *d*, Cl-233, dots or dot designs, bird track, parallel straight lines, zig-zag lines, ladder - 1 pole, rake,

crosshatching.

Plate 32. Red Rock Canyon area petroglyphs and pictographs. a, Cl-233, connected circles, curvilinear meander, convoluted rake, parallel straight lines, rake, zig zag lines, star, ladder 1 pole, horned human, human stick limbs; b, Cl-233, circle, curvilinear meander, convoluted rake, parallel straight lines, zig zag lines, star, human stick limbs; c, Cl-234, connected circles, connected dots, dots or dot designs, block-grid, parallel straight lines, triangles, rake; d, Cl-234, concentric circle, dots or dot designs, parallel straight lines, triangles, rake.

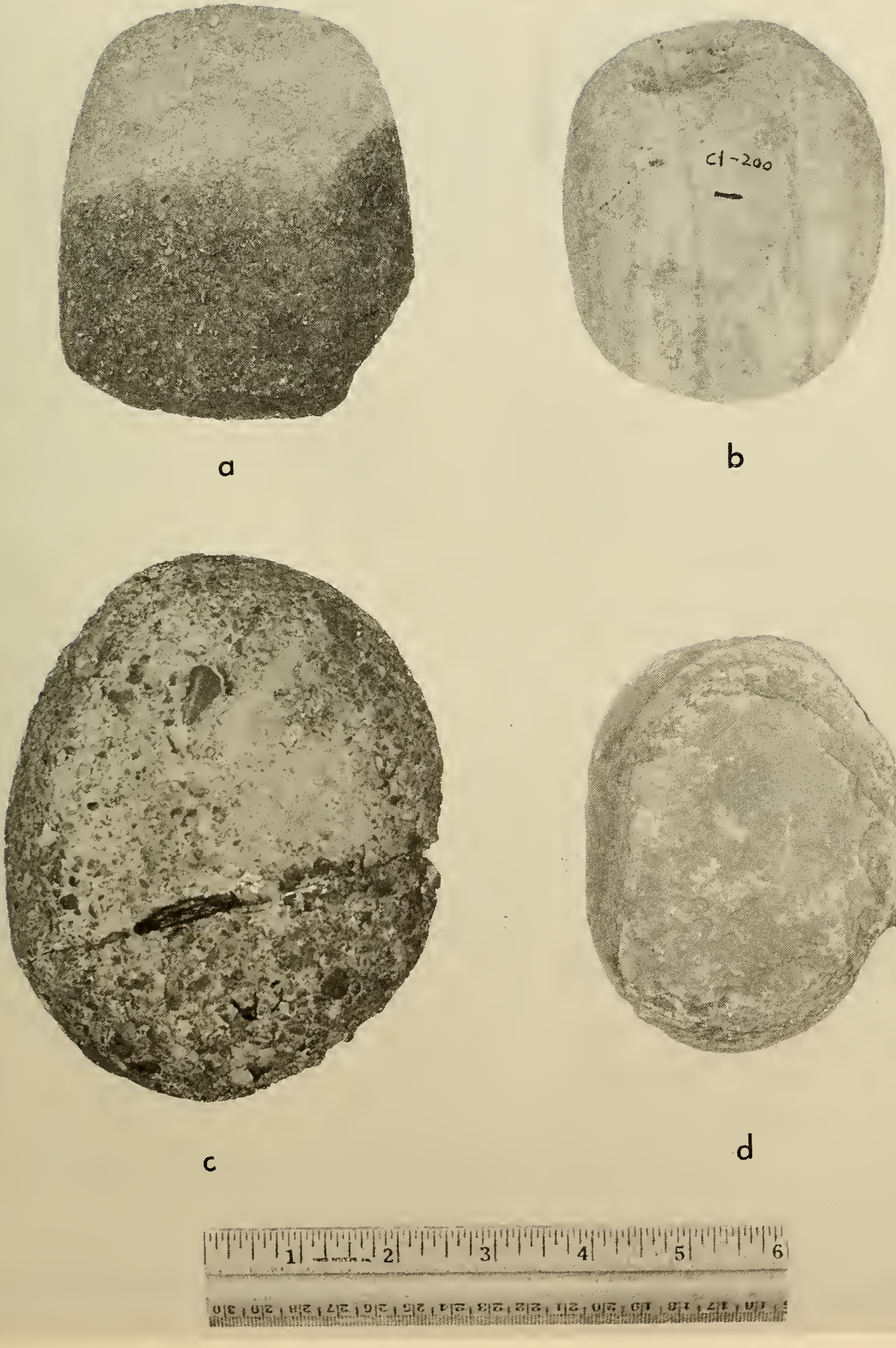
Plate 33. Red Rock Canyon area petroglyphs. a, Cl-234, circle, bisected circle, sectioned circle, tailed circle, chain of circles, curvilinear meander, dots or dot designs, wavy lines, rectangular grid, parallel straight lines, triangles, rake; b, Cl-234, concentric circle, connected circles, chain of circles, dots or dot designs, oval grid, parallel straight lines, ladder 2 poles, rake, crosshatching, plant form; c, Cl-234, sectioned circle, connected circles, oval grid, rectangular grid, ladder - 2 poles; d, Cl-234, parallel straight lines, rake.

Plate 34. Red Rock Canyon area petroglyphs. a, Cl-236, circle, bisected circle, circle cluster, connected circles, chain of circles, curvilinear meander, convoluted rake, dots or dot designs, wavy lines, triangles, ladder- 1 pole, rake, crosshatching; c, Cl-236, bisected circle, connected circles, dots or dot designs, triangles, rake, rectangular meander, crosshatching, plant form; c, Cl-236, circle, bisected circle, tailed circle, connected circles, dots or dot designs, oval grid, parallel straight lines, ladder

1 pole, rectangular meander, crosshatching; d, Cl-236, wavy lines, parallel straight lines, rake, foot or paw.

Plate 35. Red Rock Canyon area petroglyphs. a, Cl-241, circle, bisected circle, spoked concentric circle, oval grid, ladder 1 pole, sheep horns; b, Cl-241, circle, concentric circle, connected circles; c, Cl-241, connected circles; d, Cl-241, circle, bisected circle, sun disc.

PLATE 1



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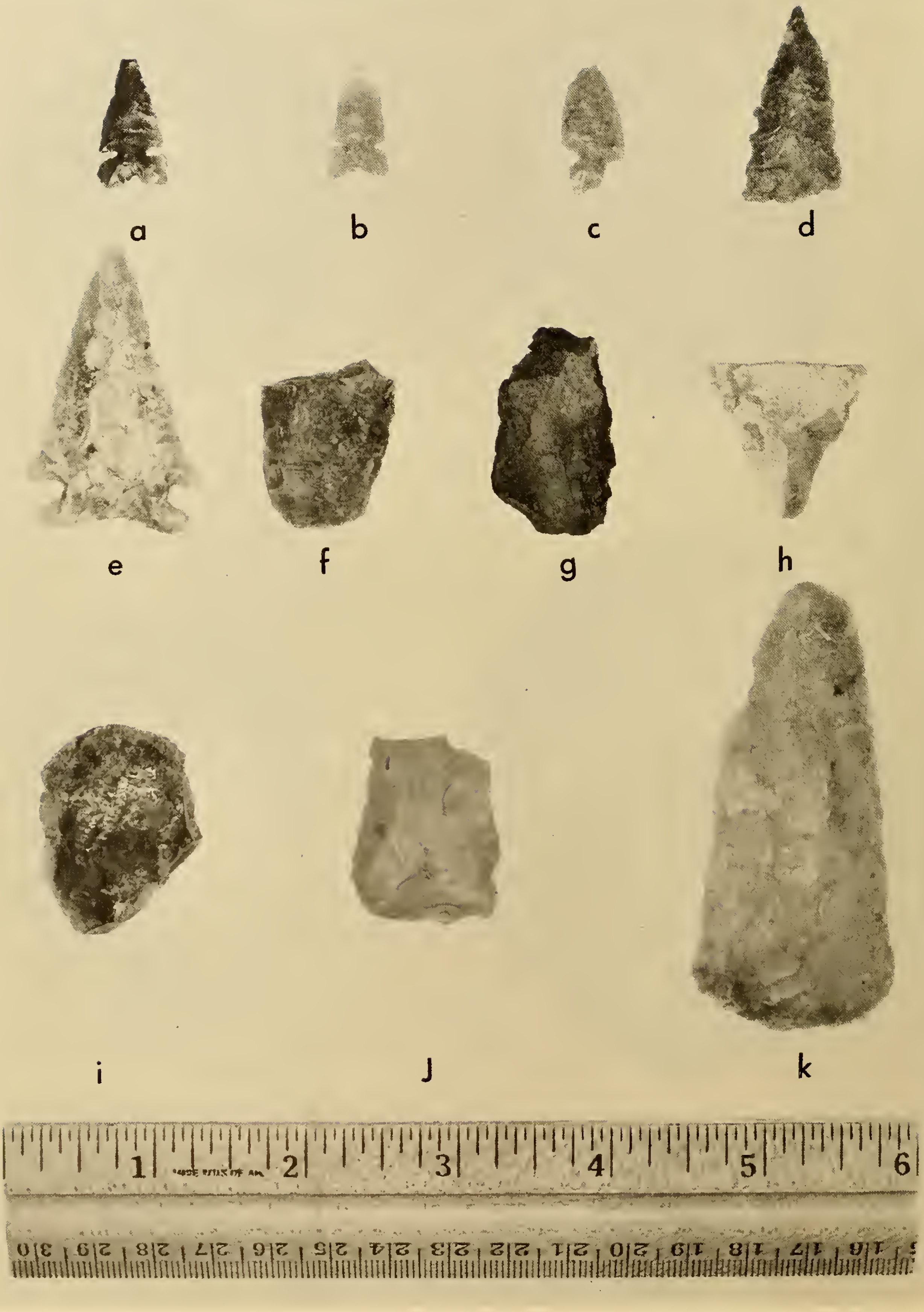

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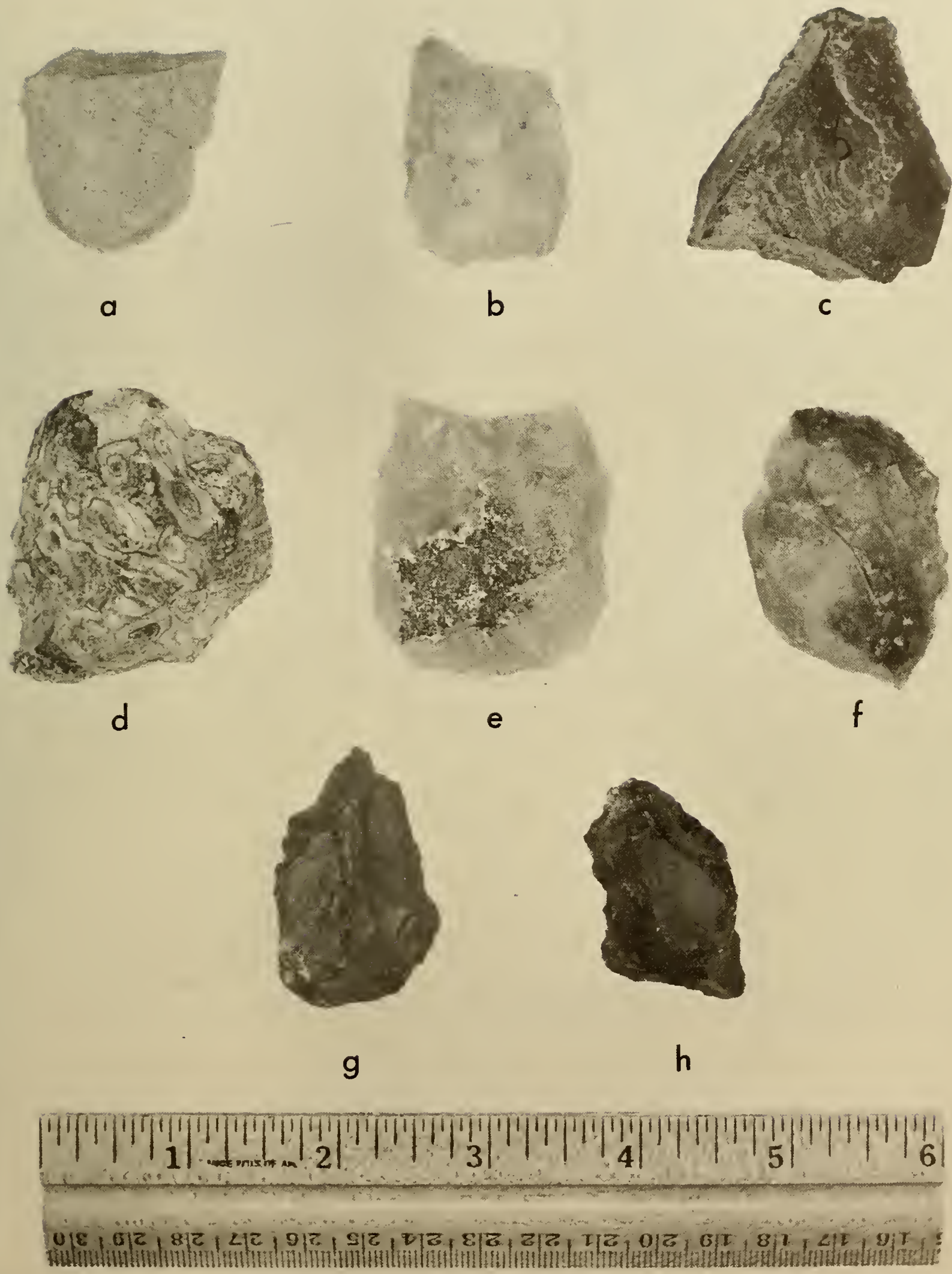

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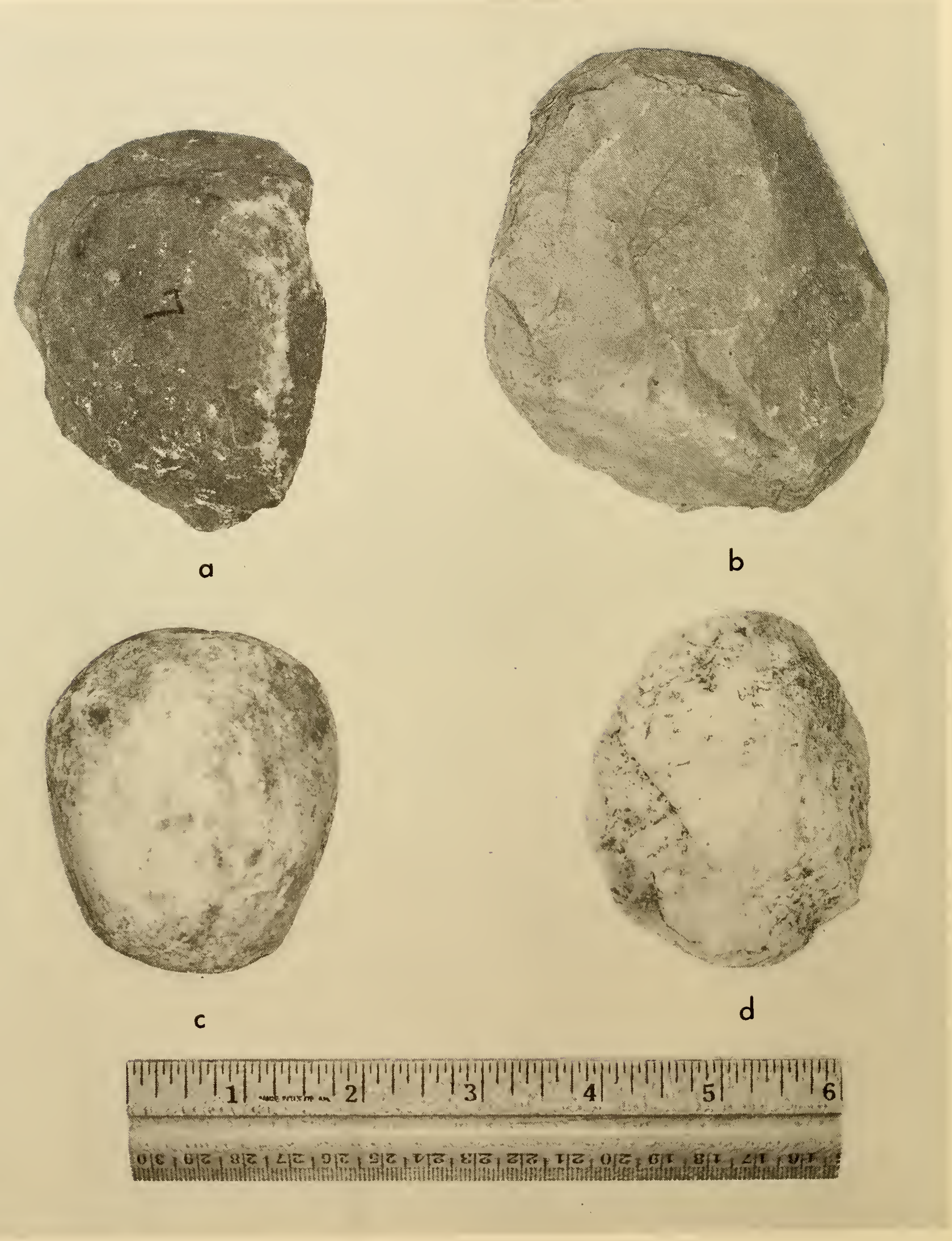

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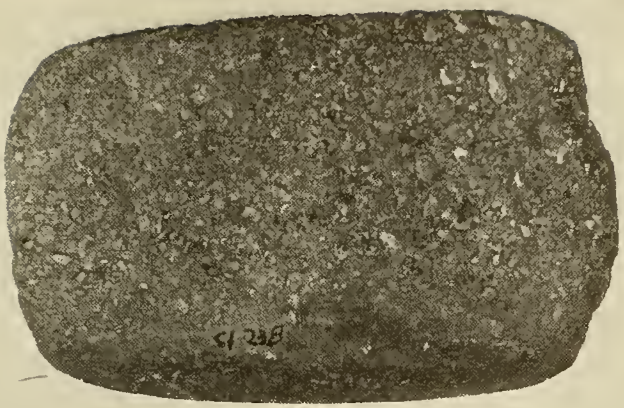

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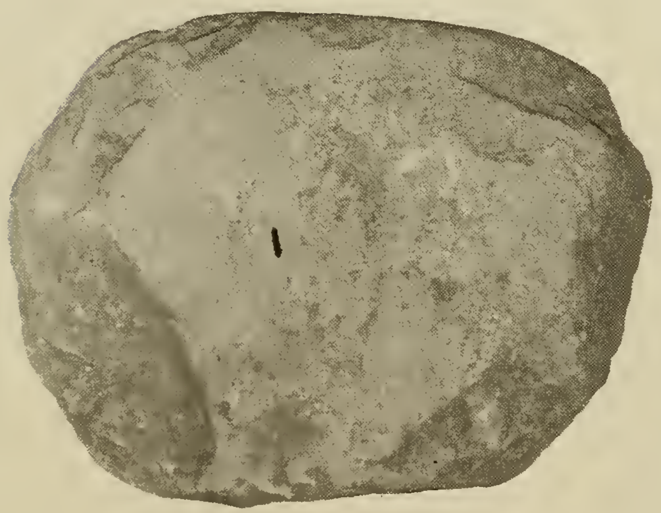

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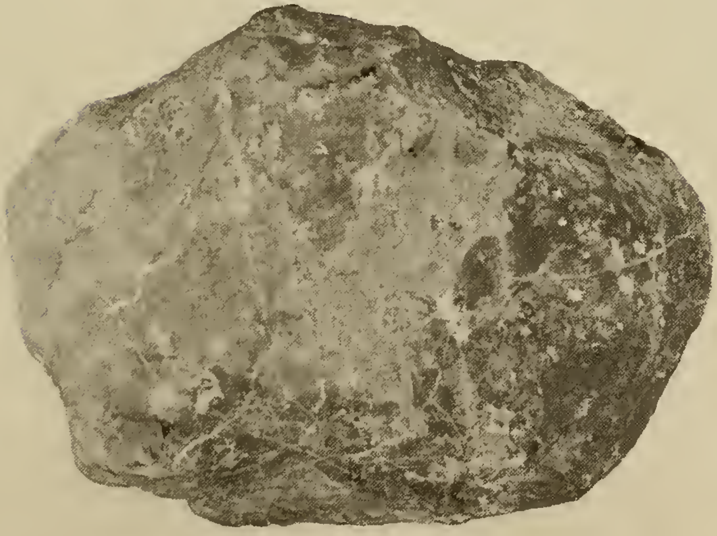

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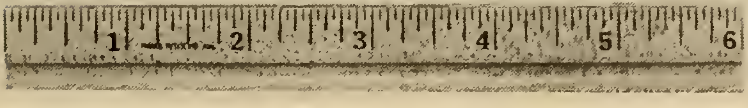

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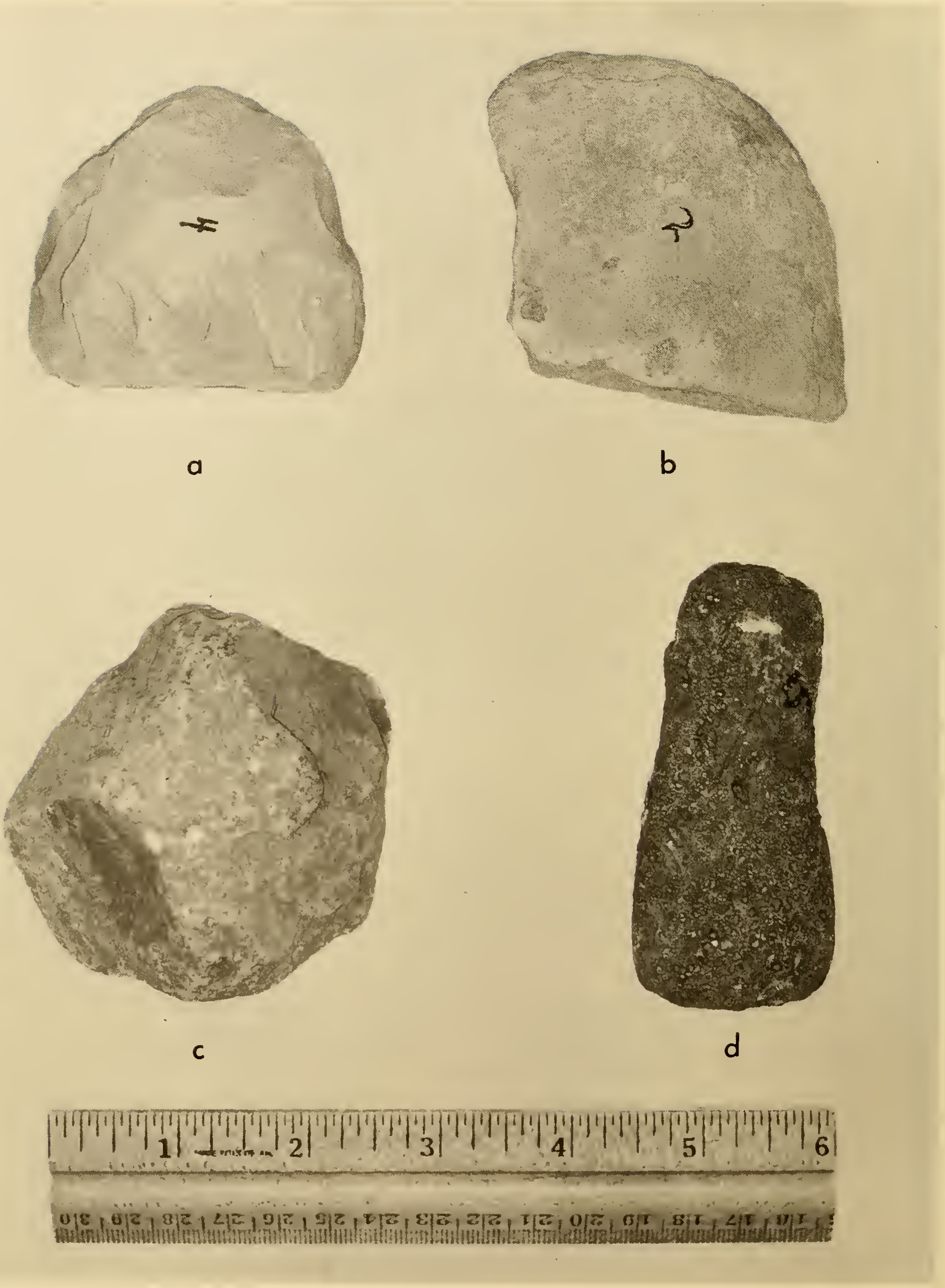

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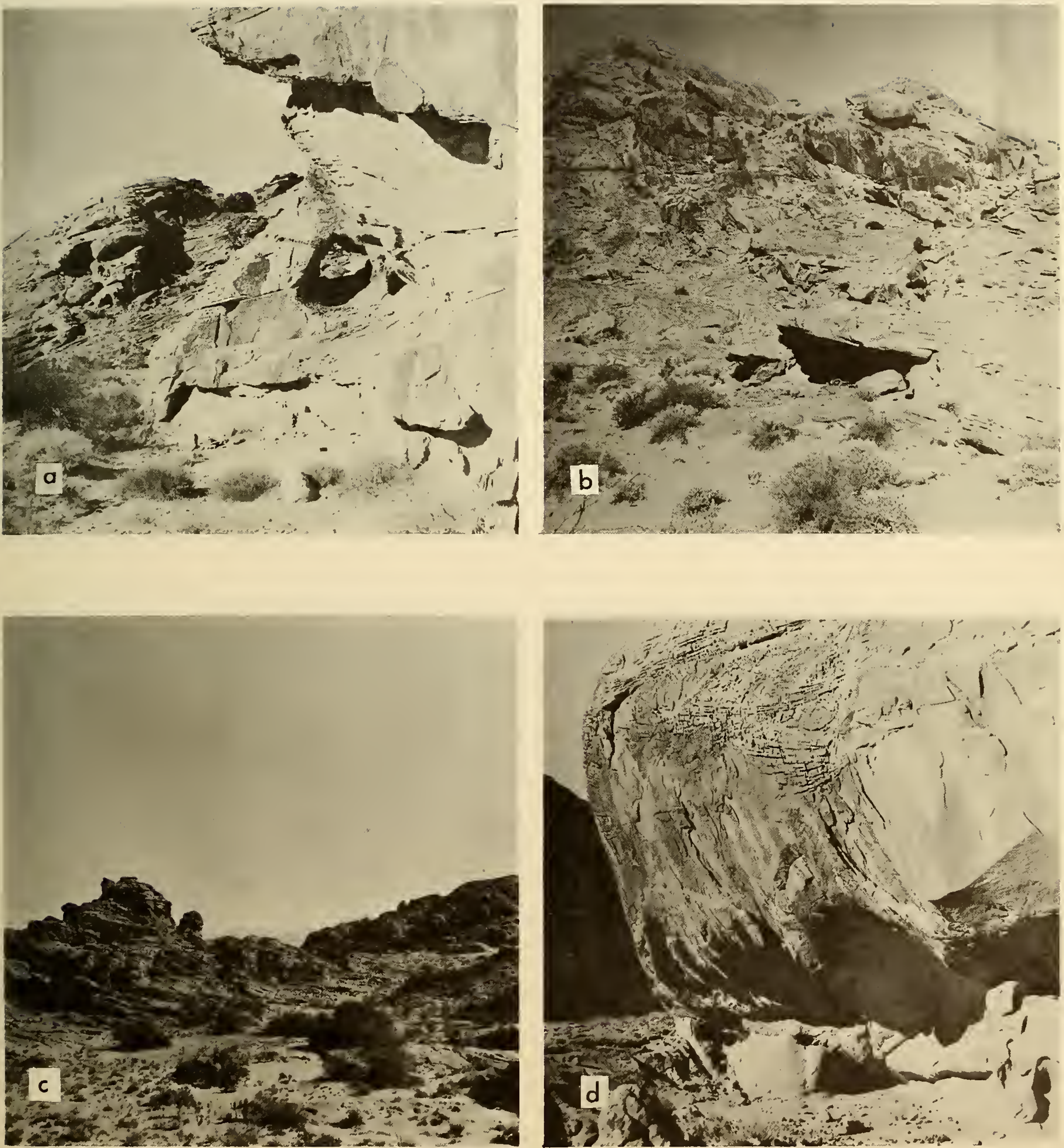

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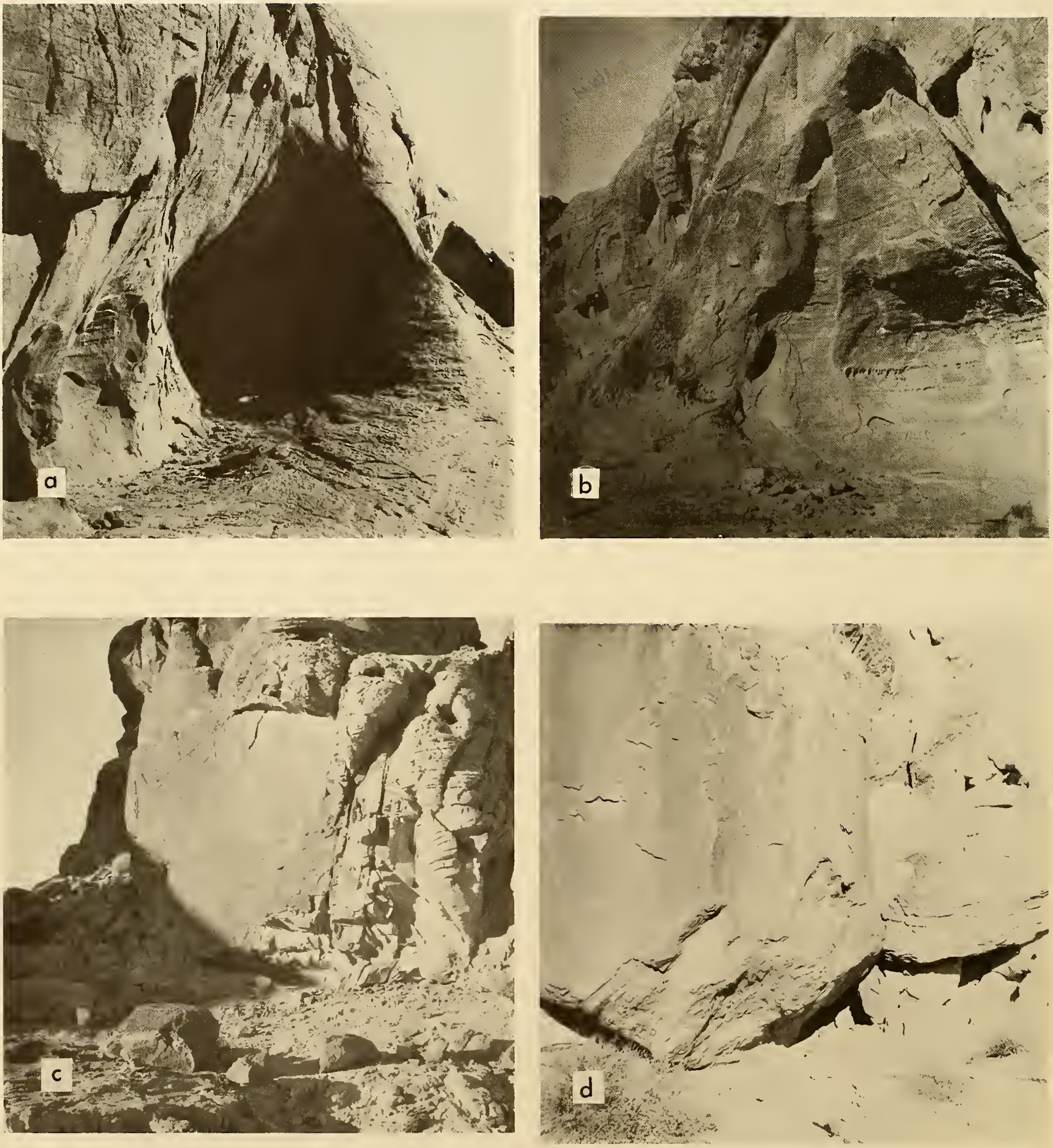
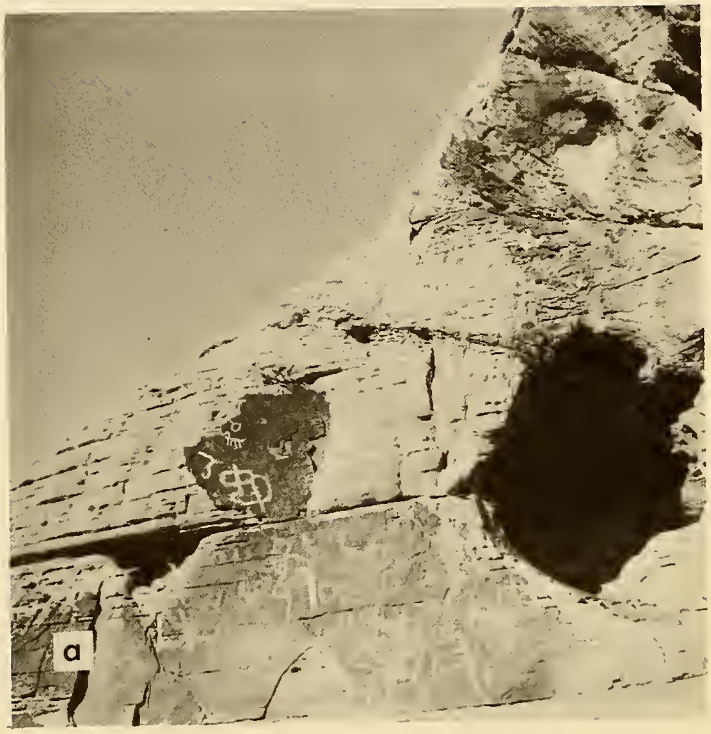
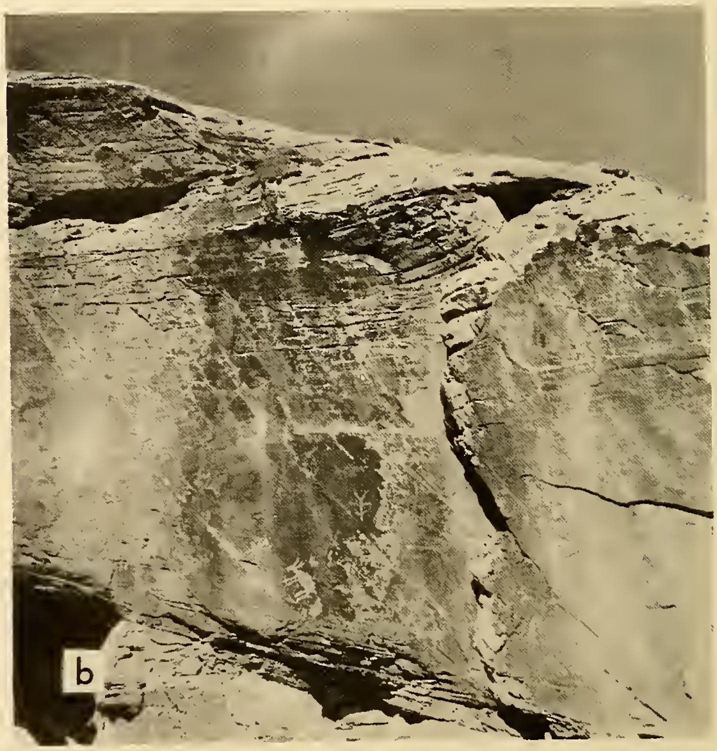
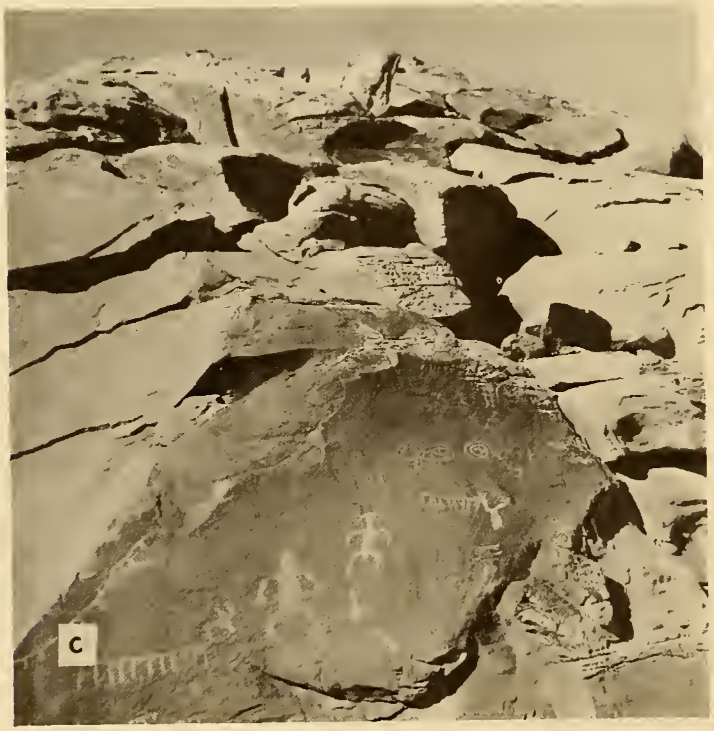


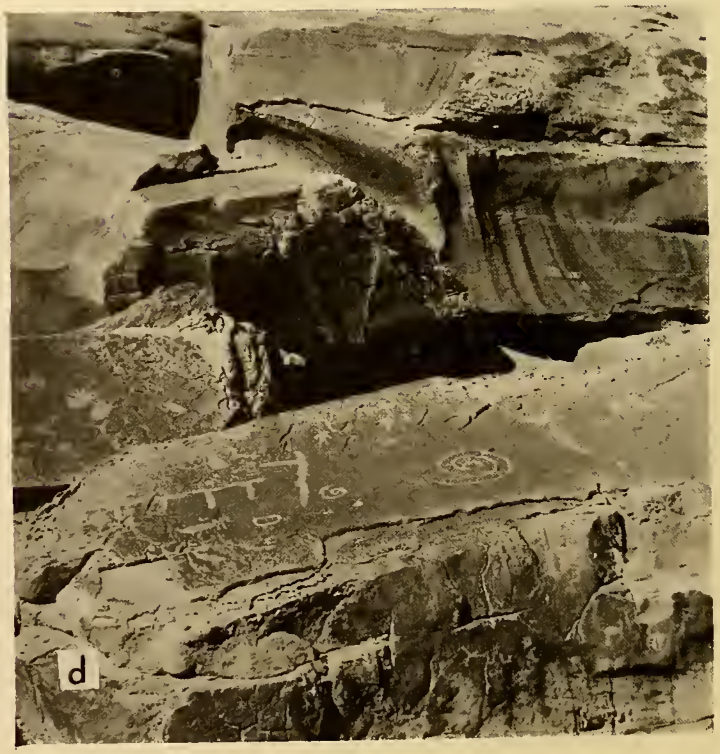
PLATE 9

PLATE 10









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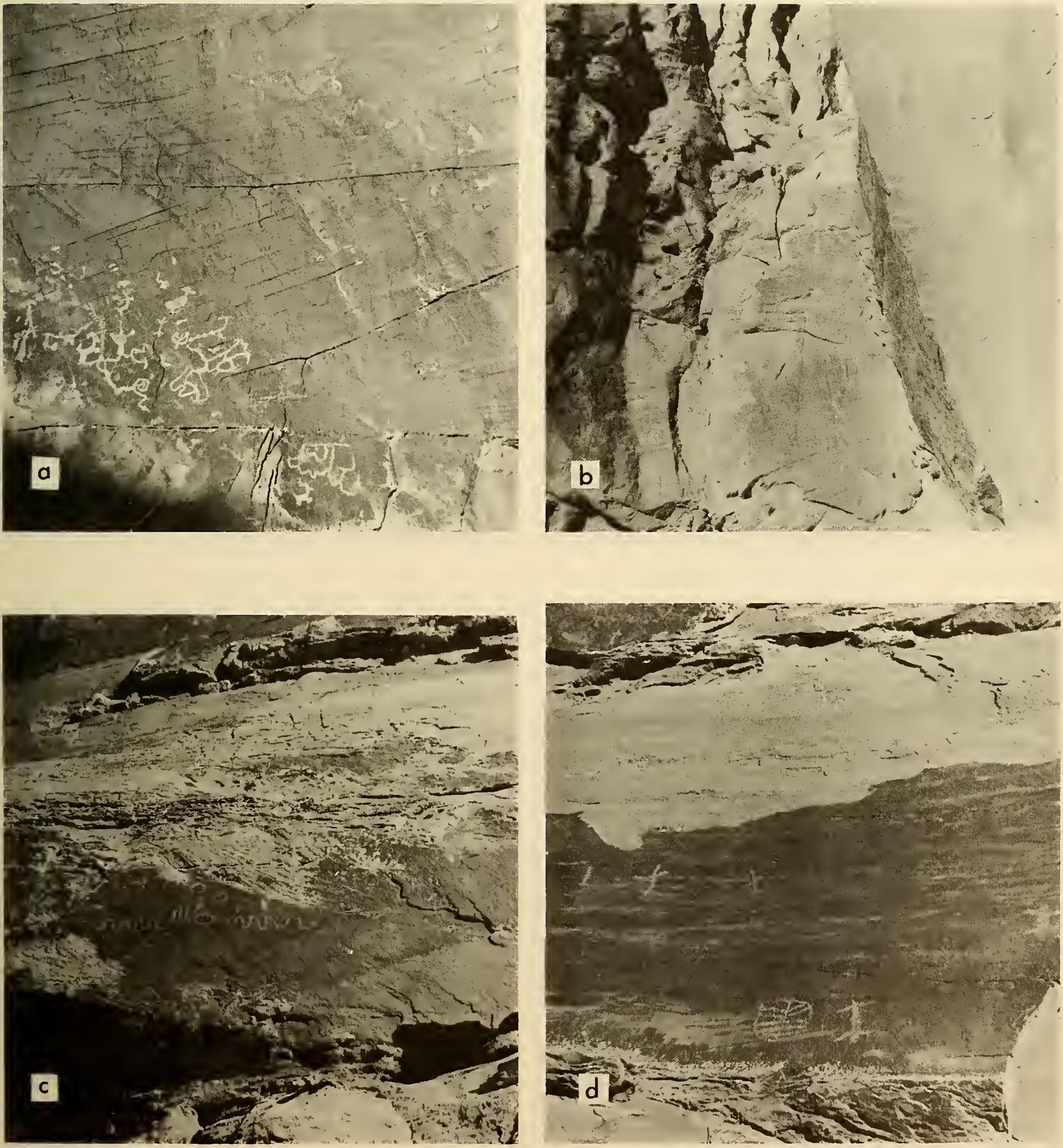

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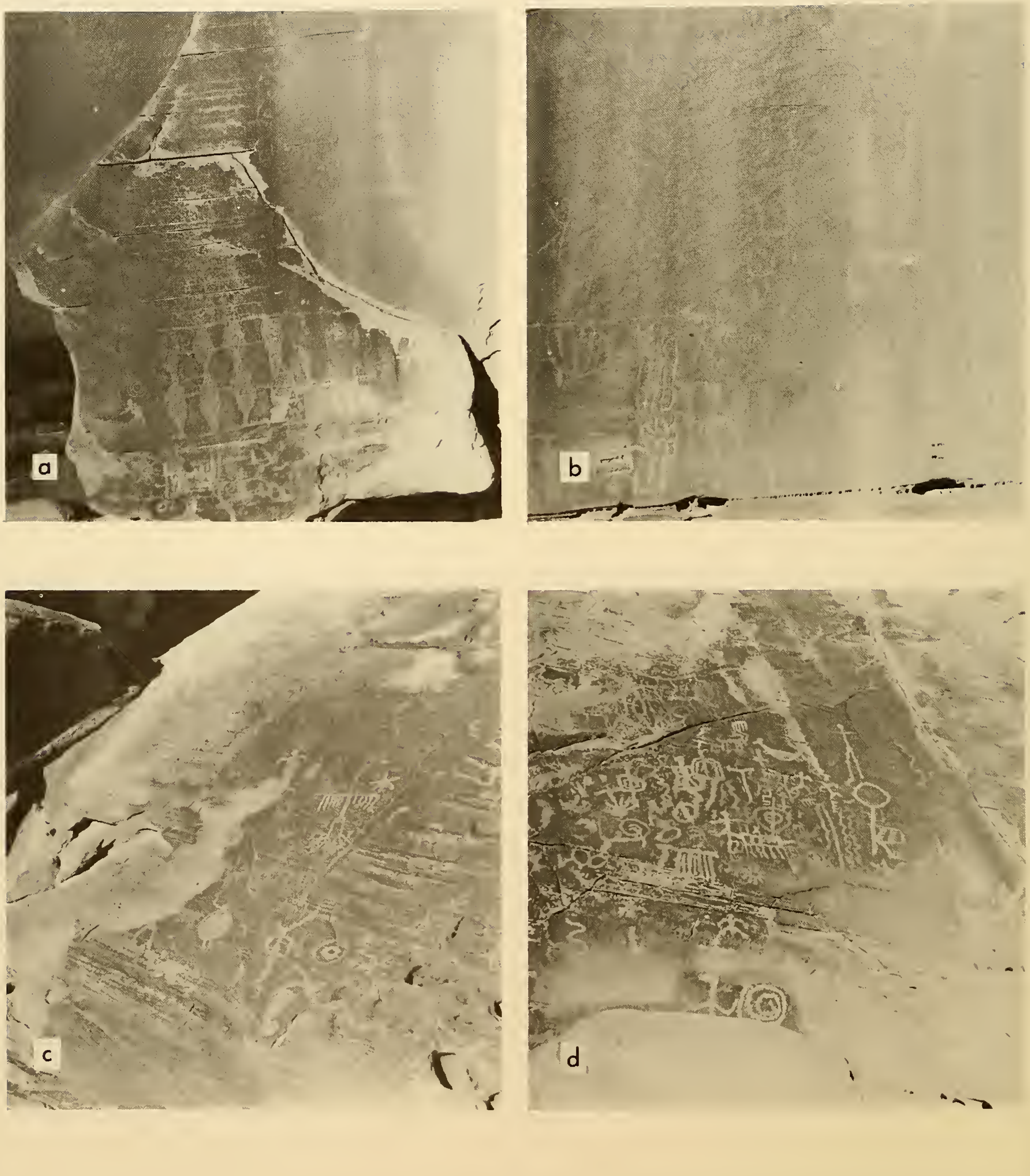

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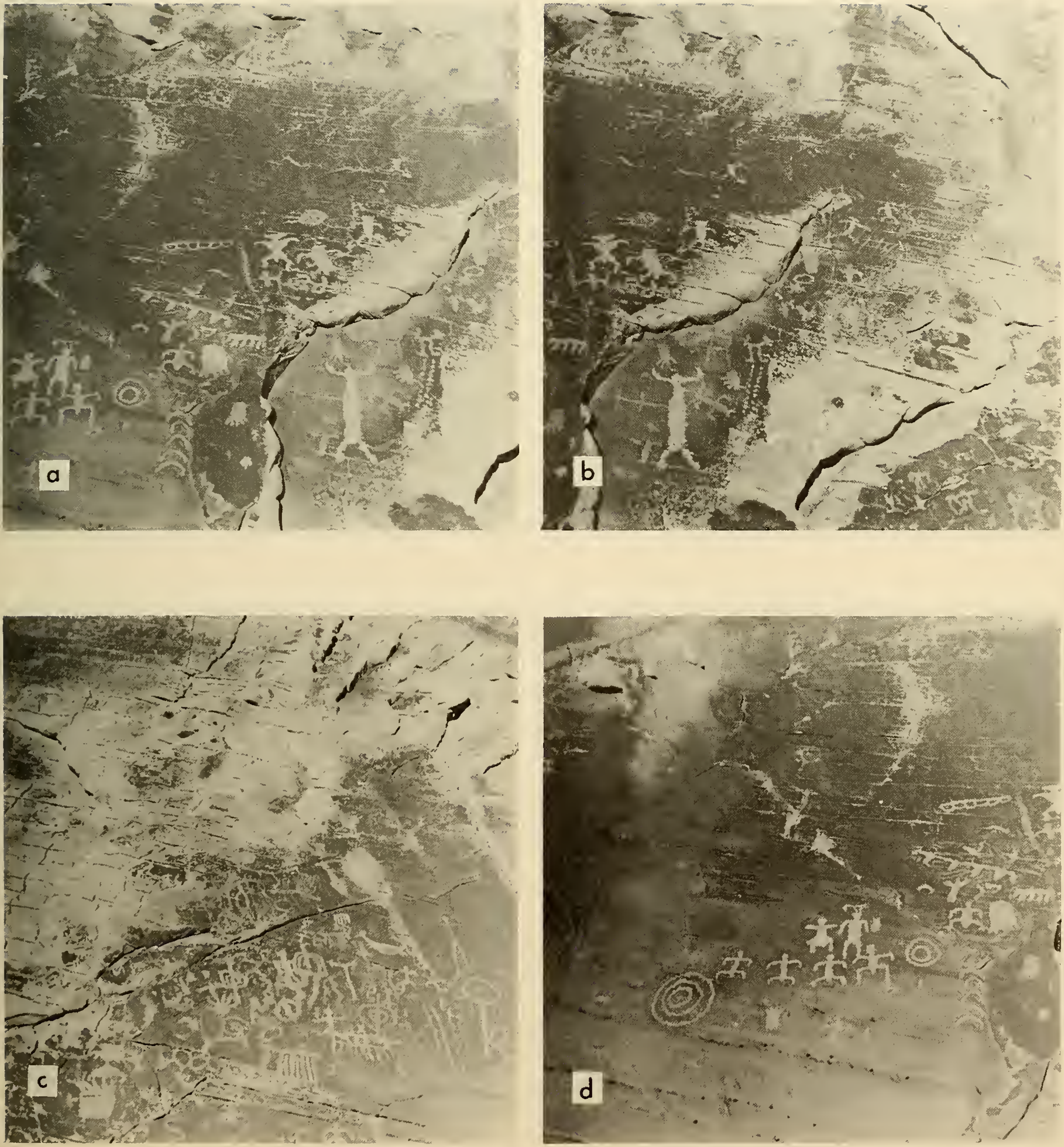

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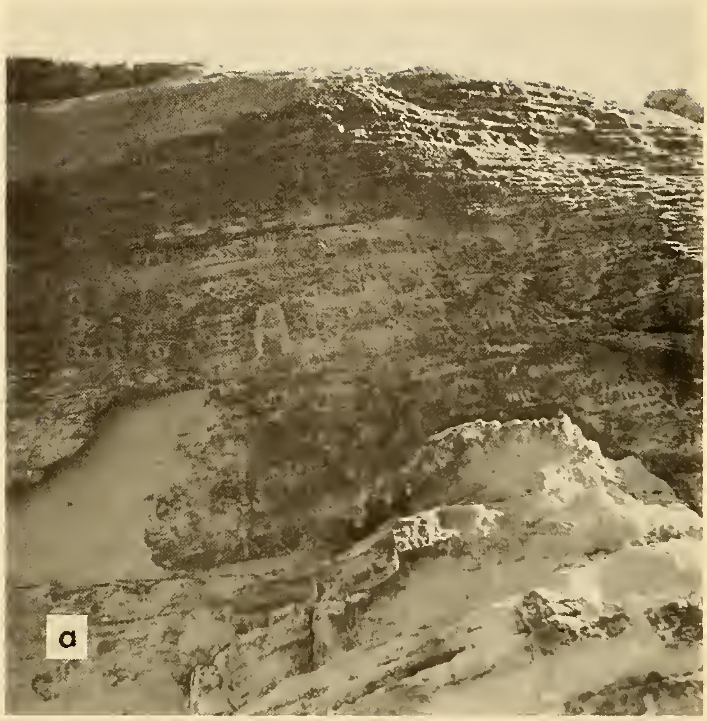

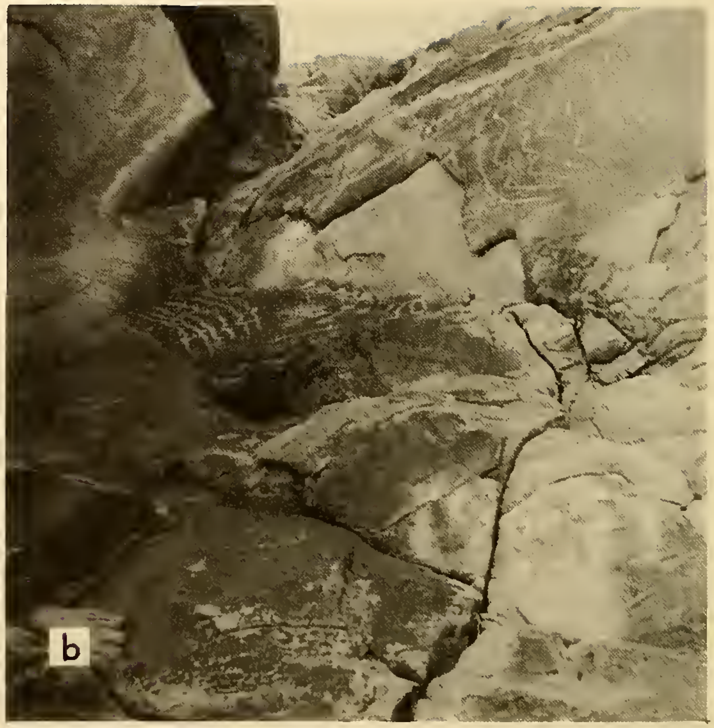

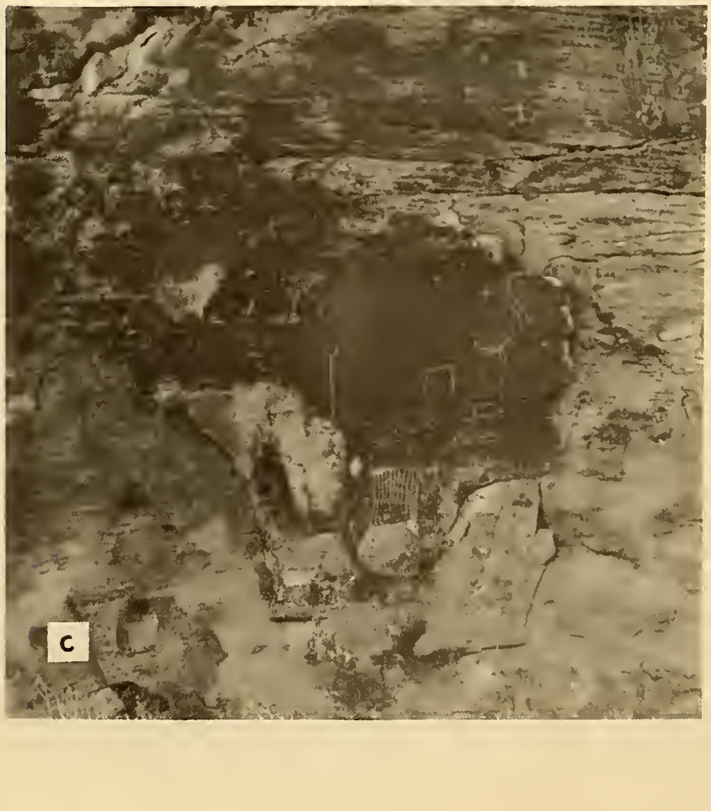

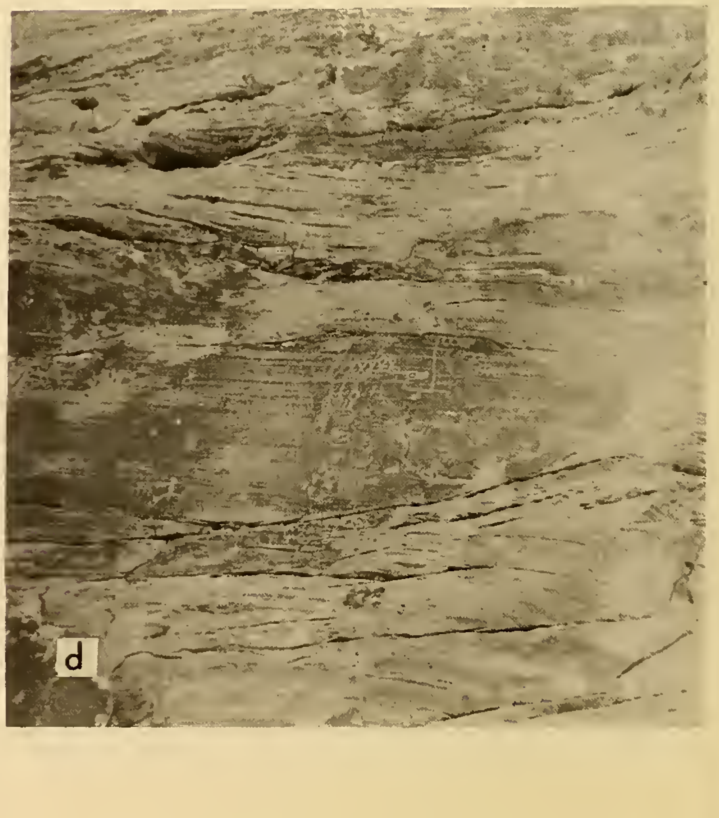

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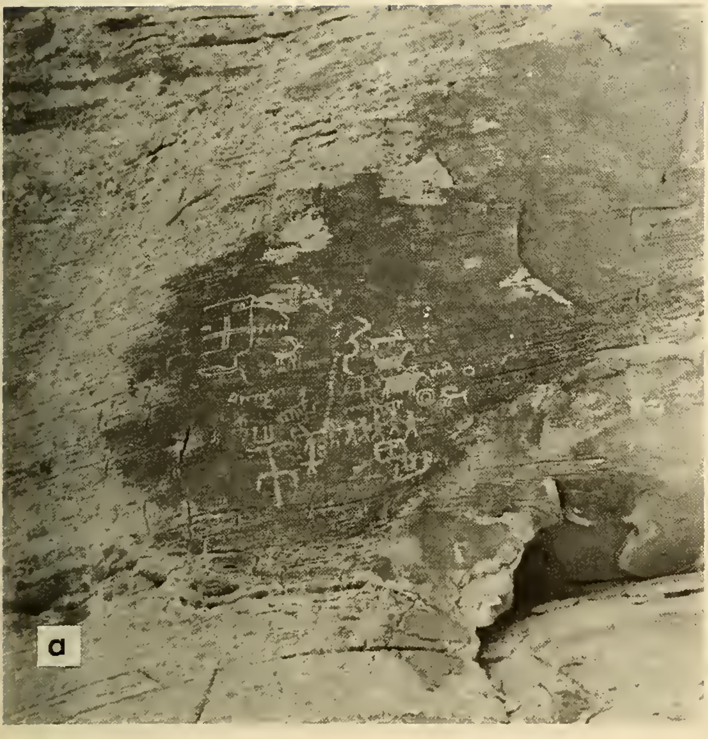

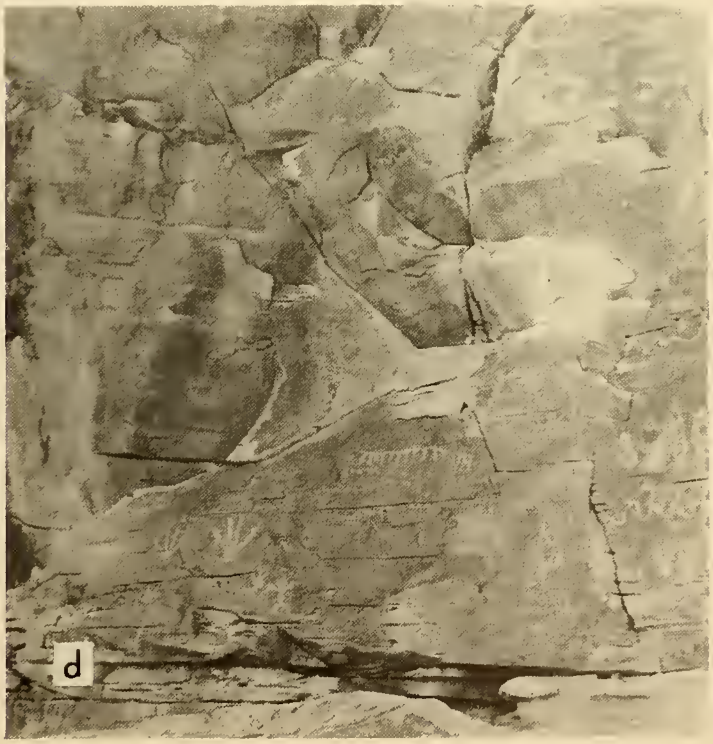

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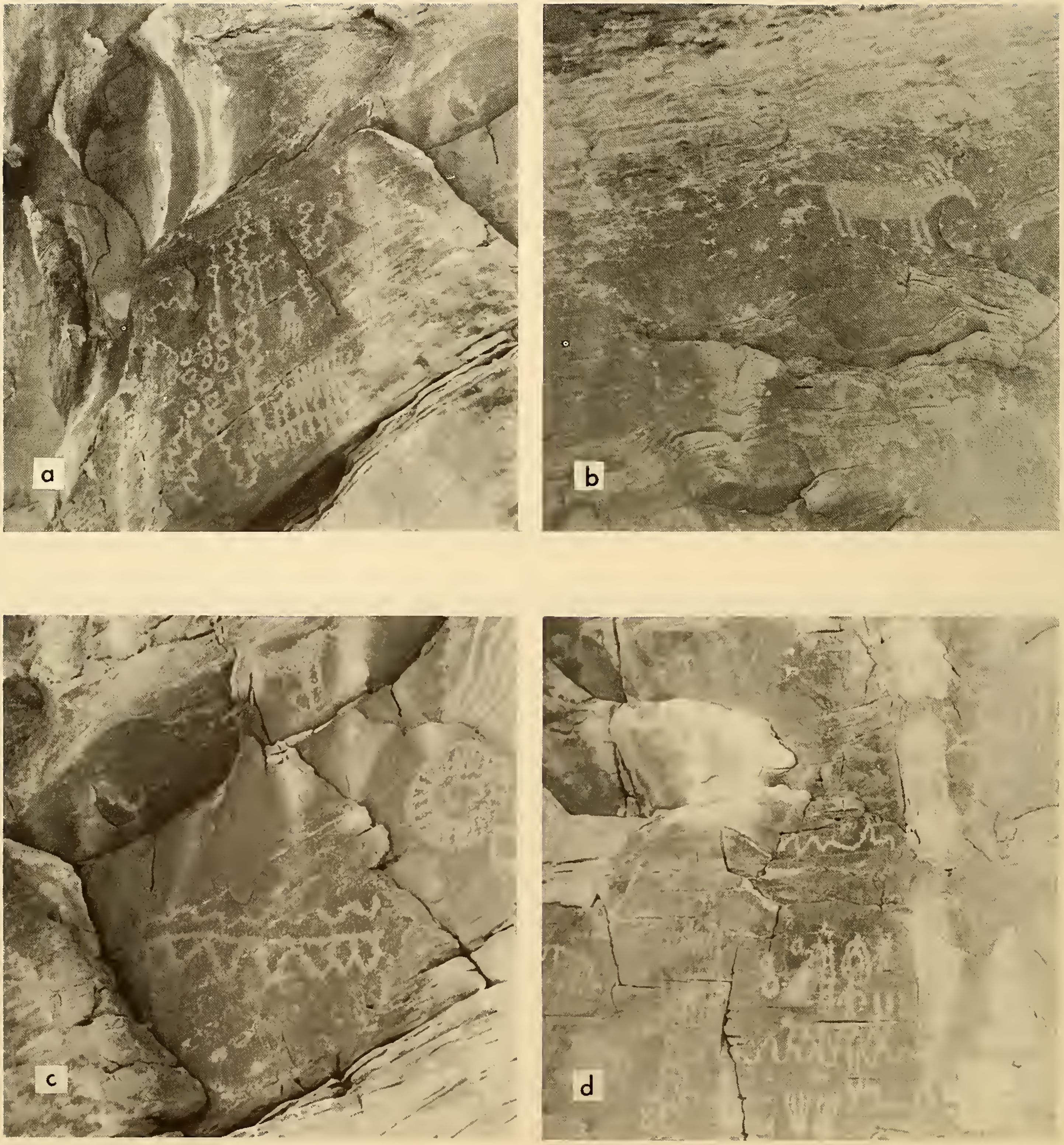

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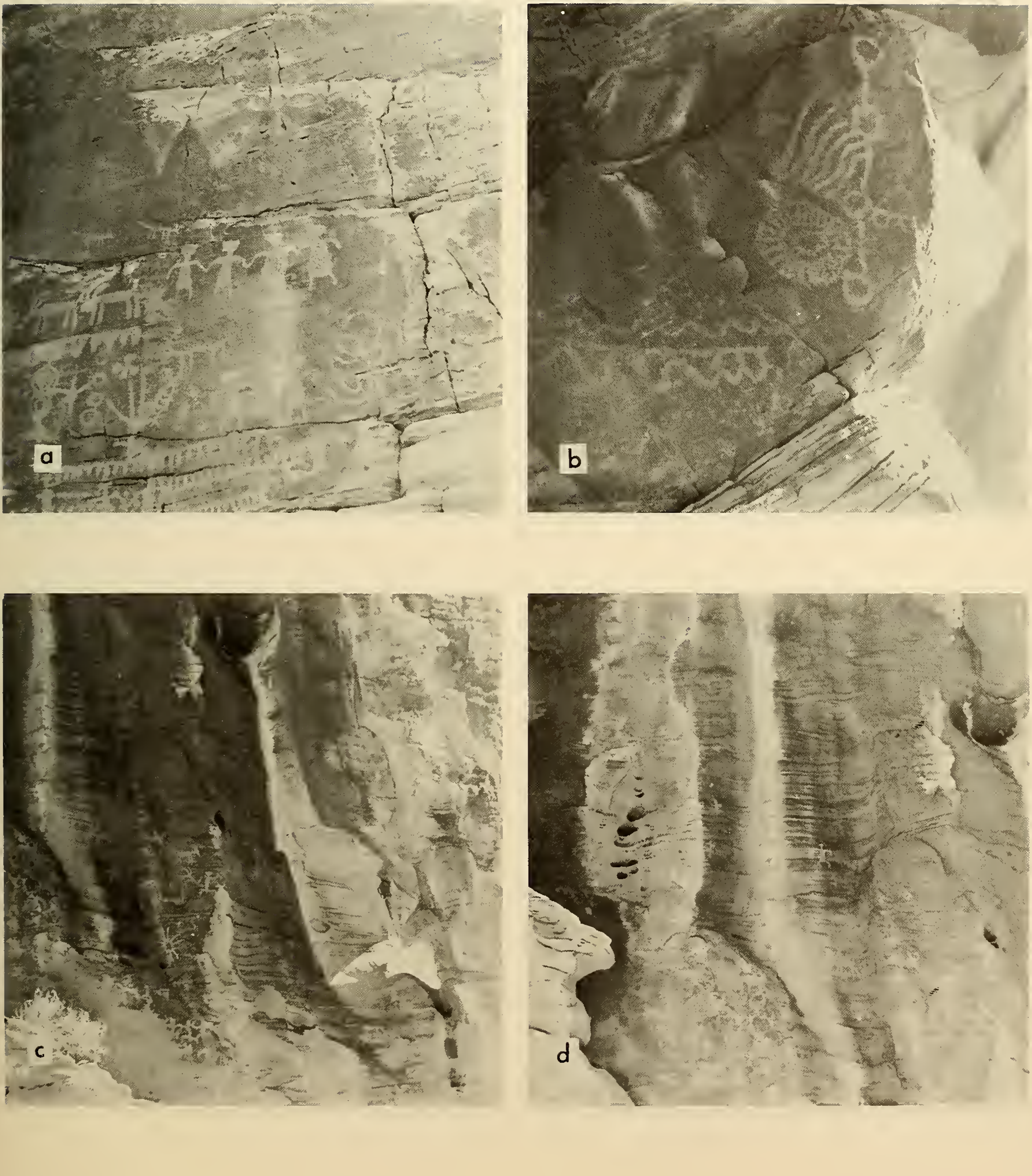

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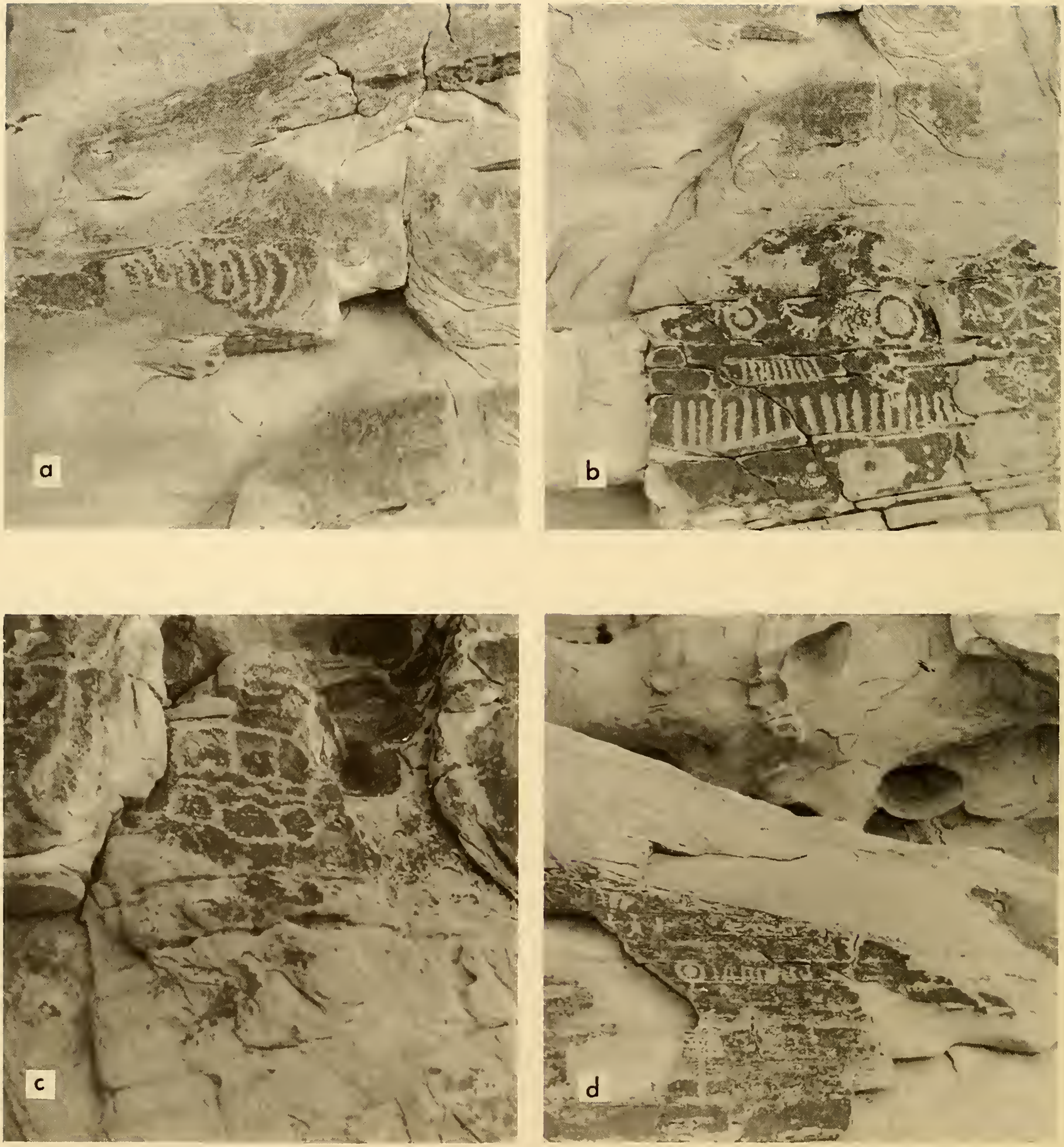

PLATE 19

PLATE 20

a

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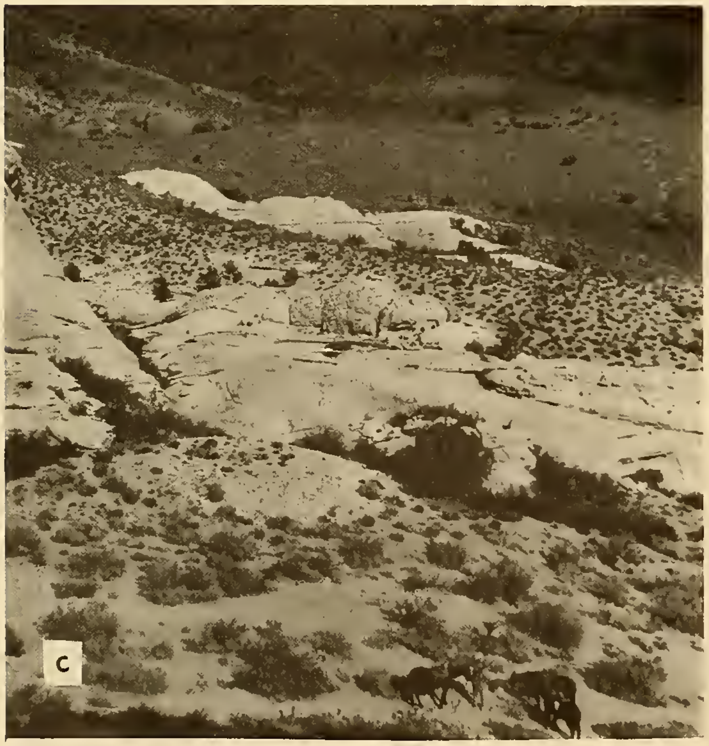
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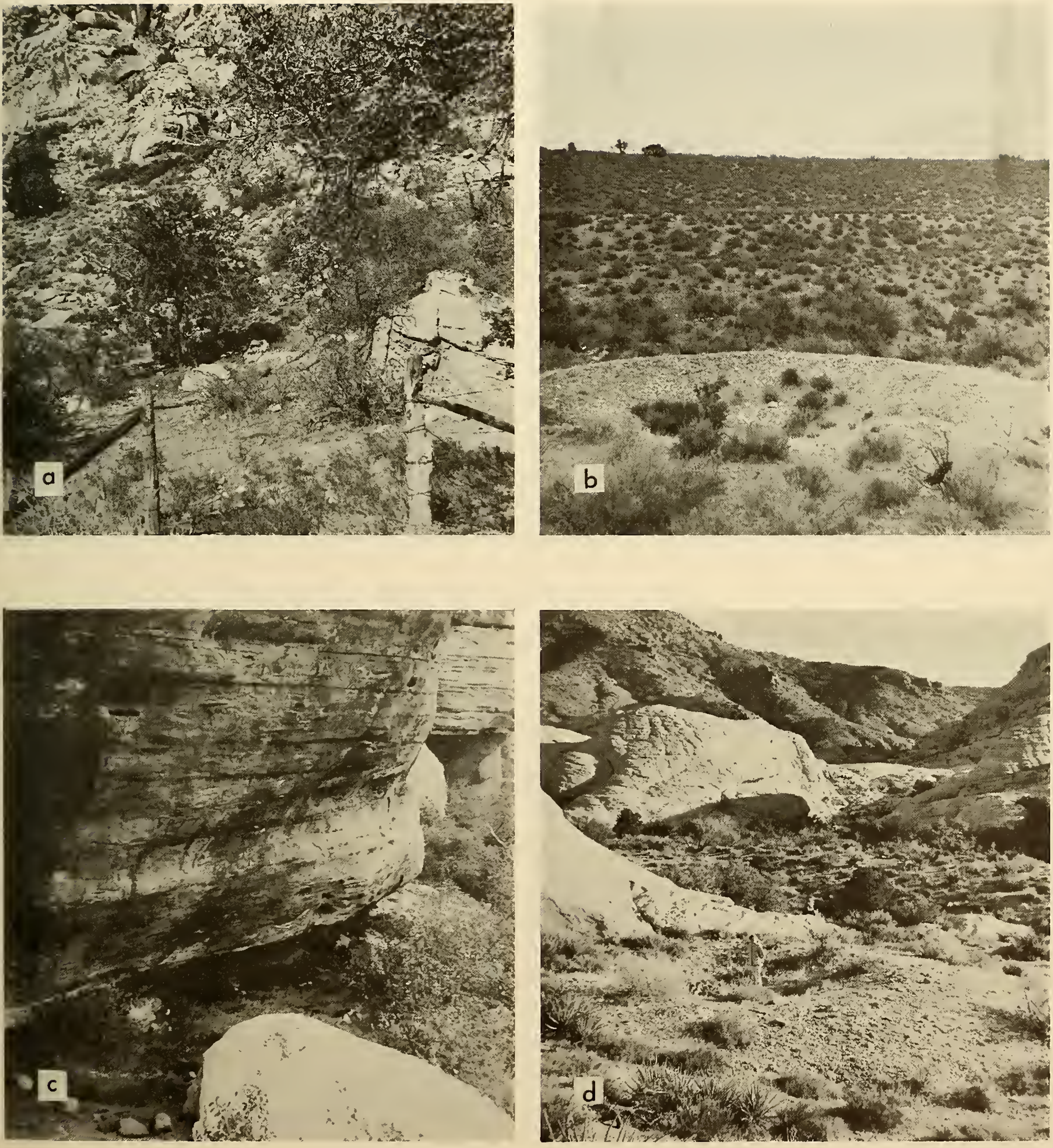

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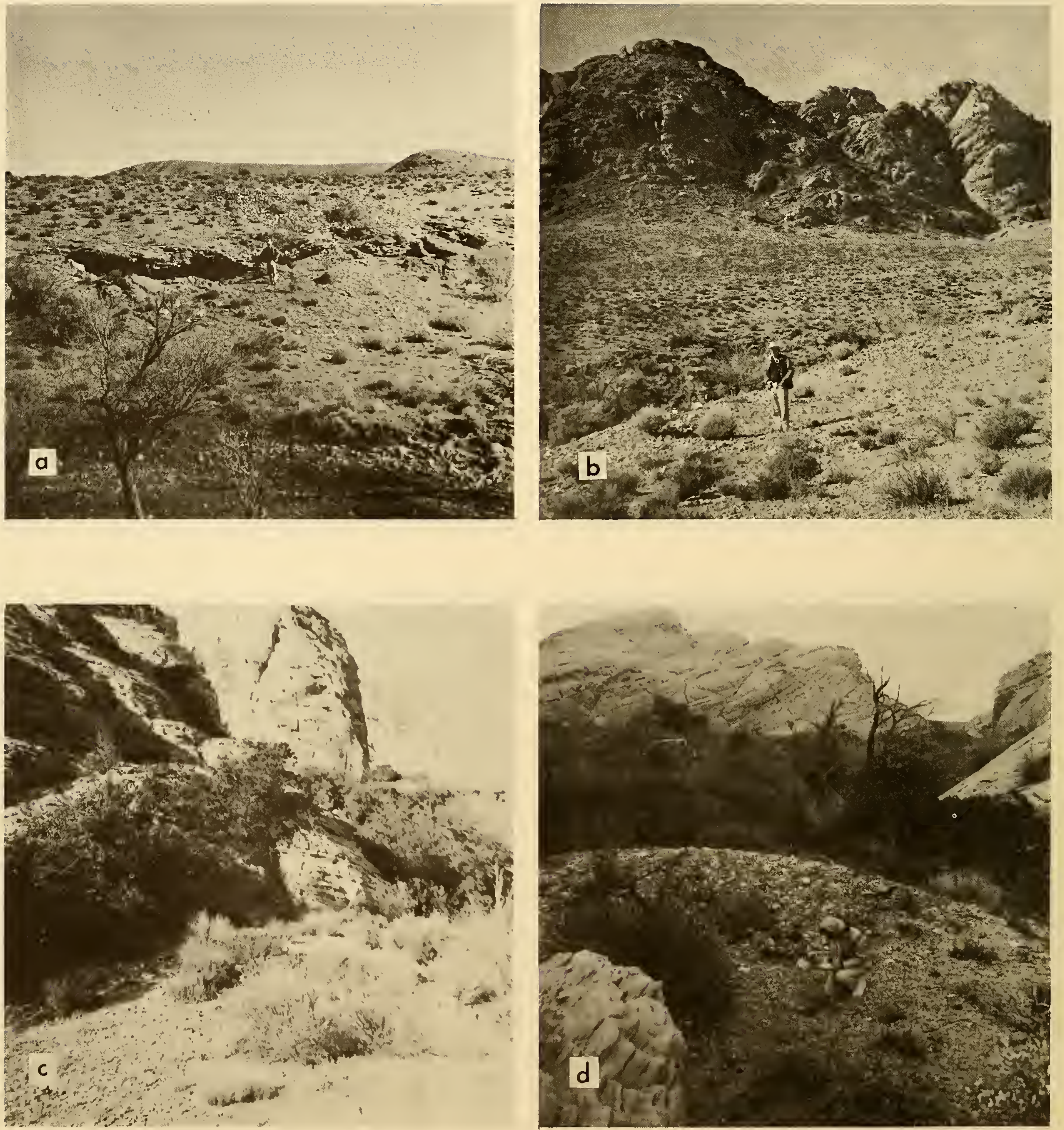

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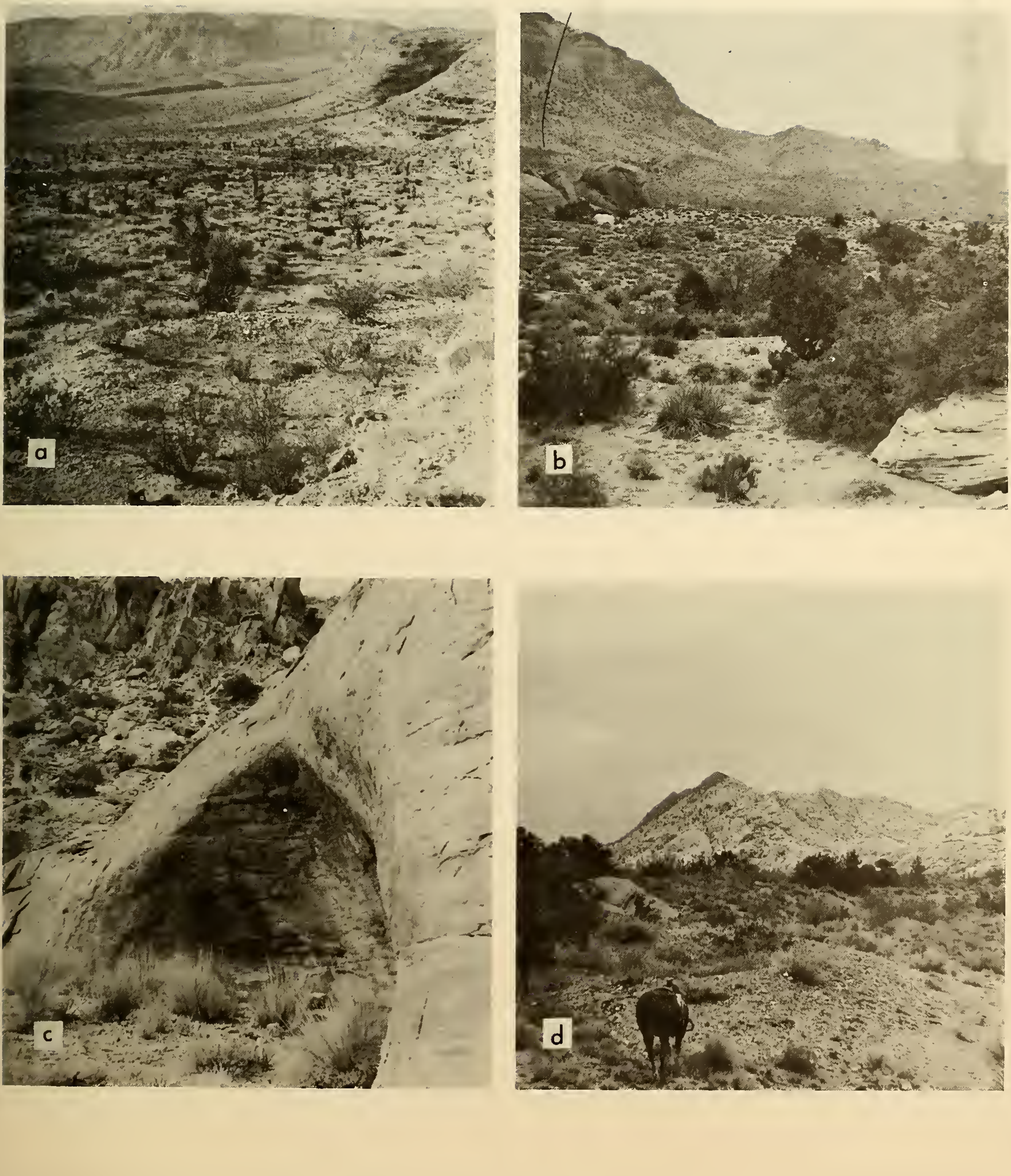

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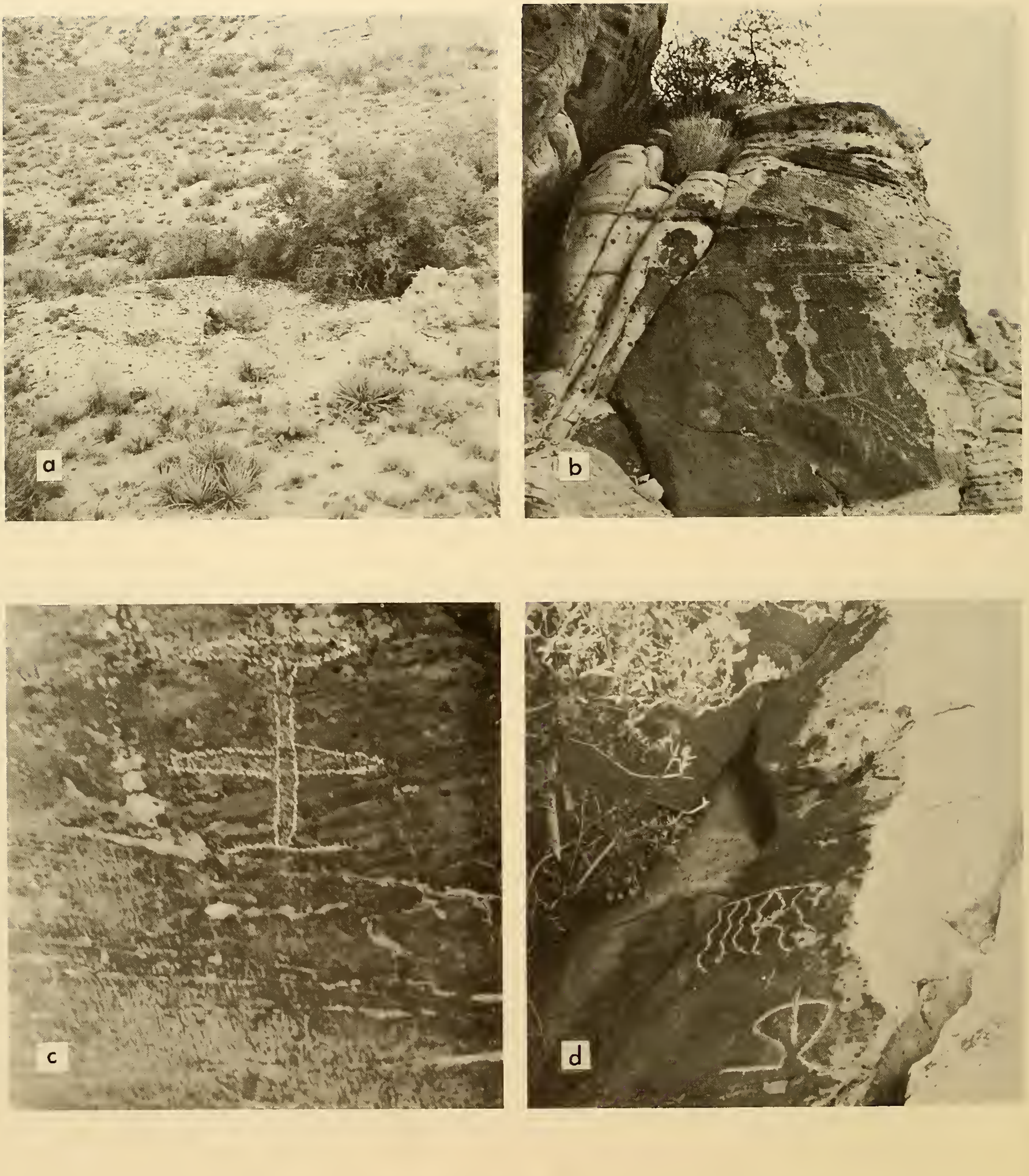

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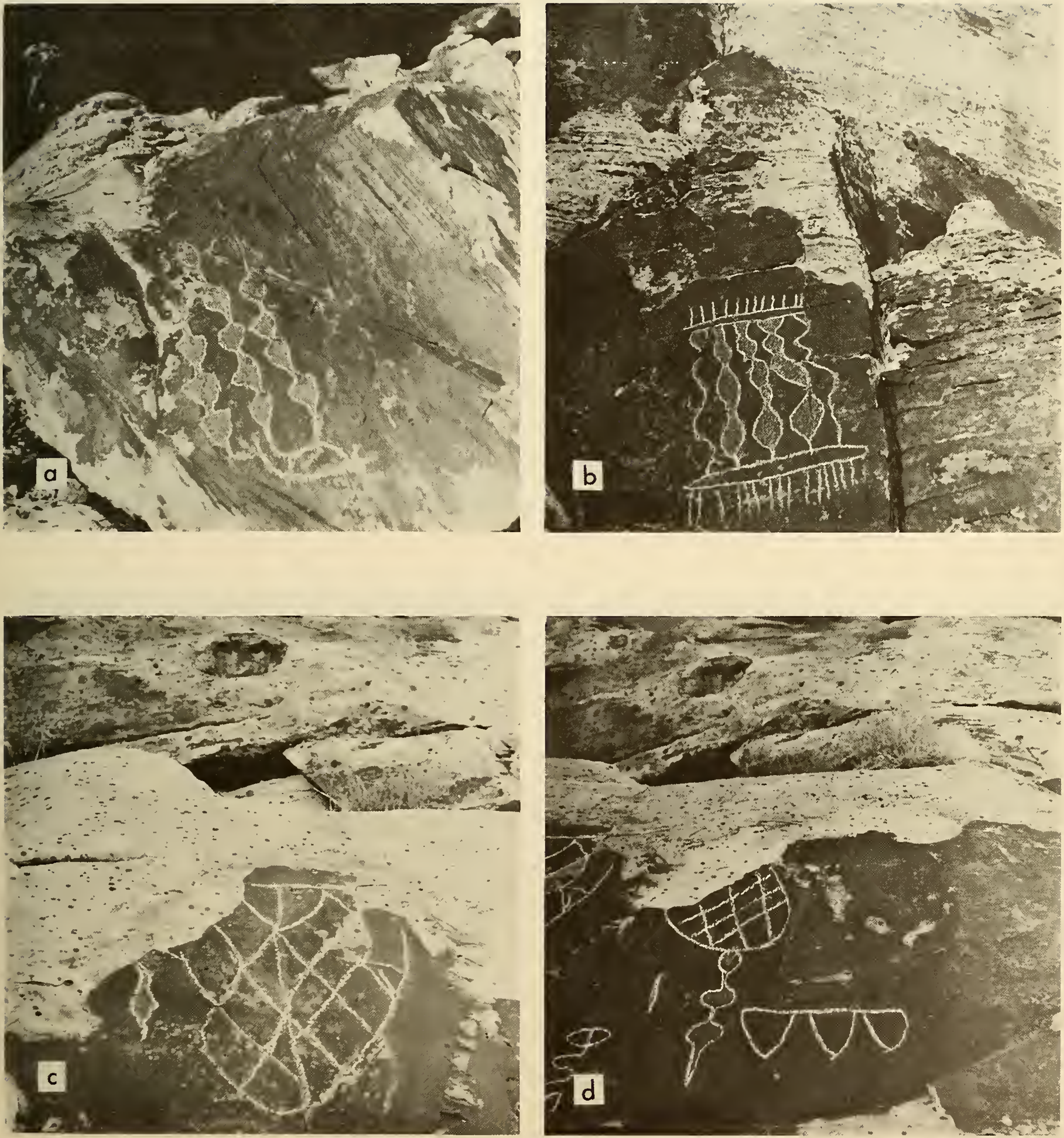

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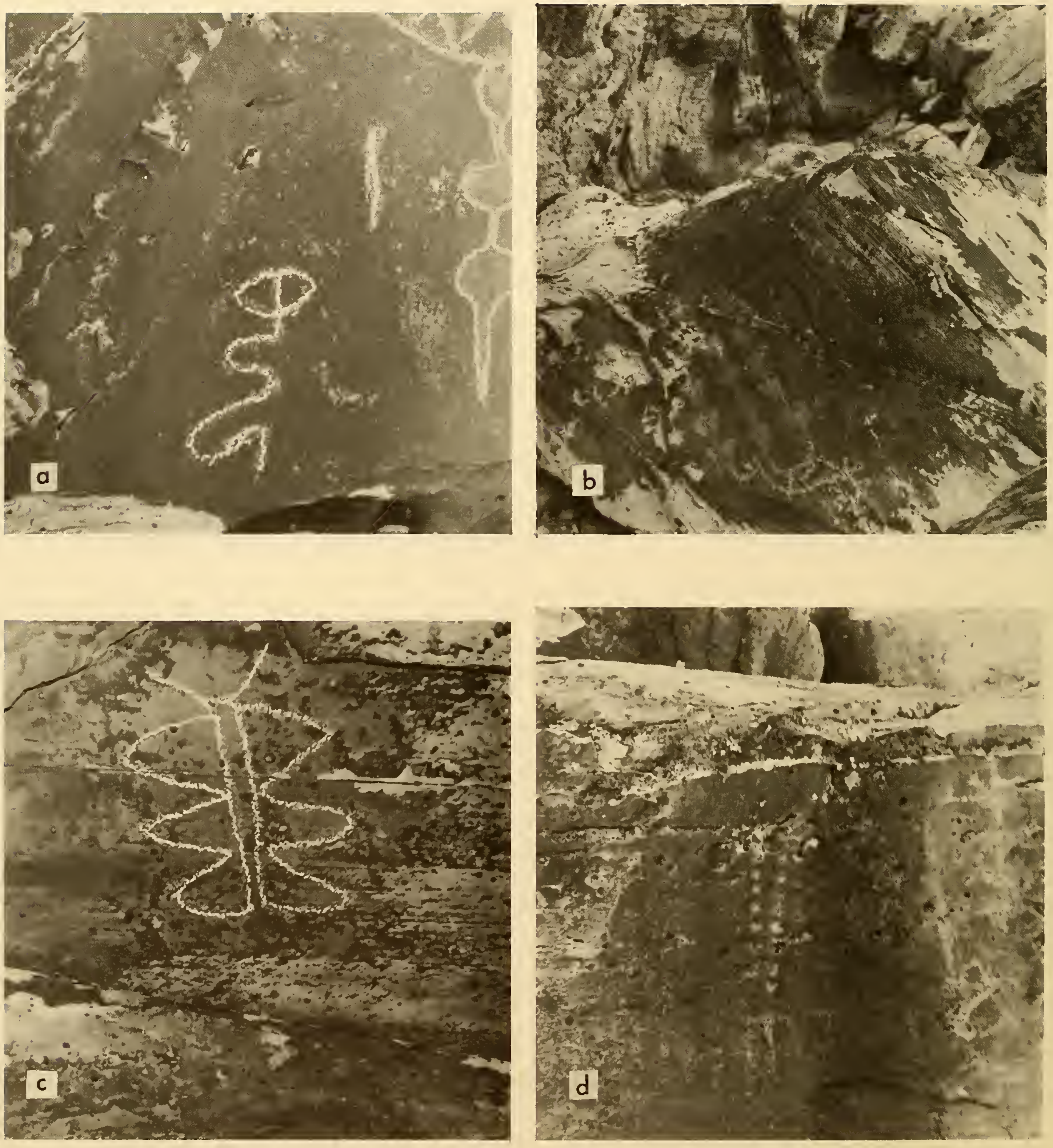

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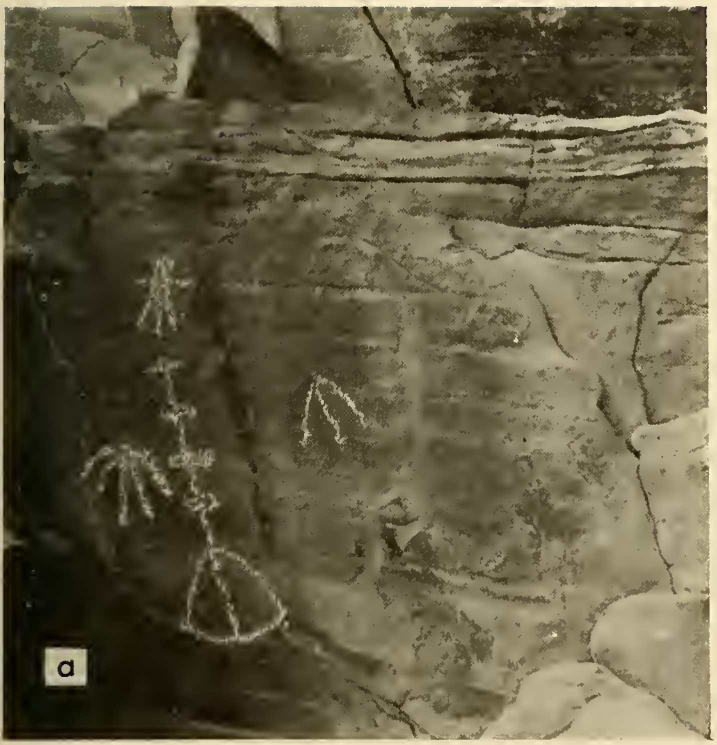

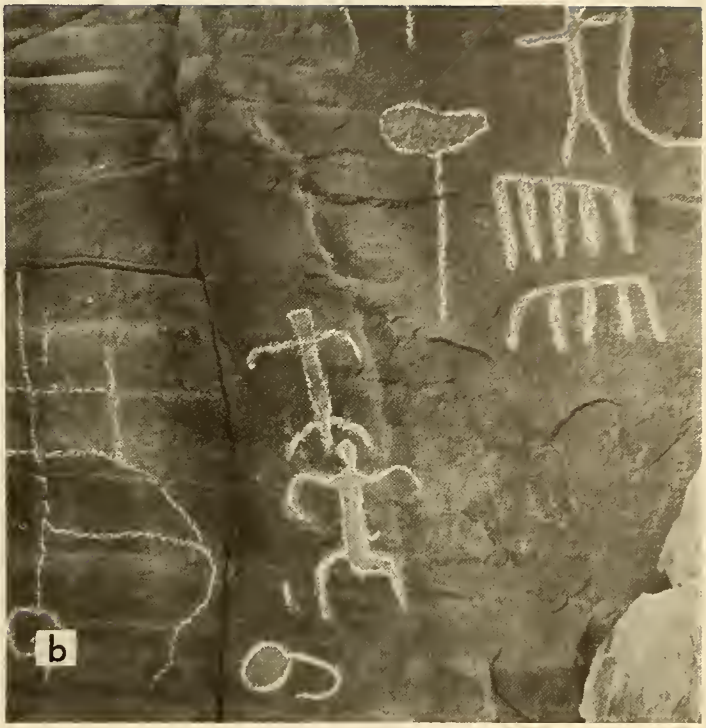

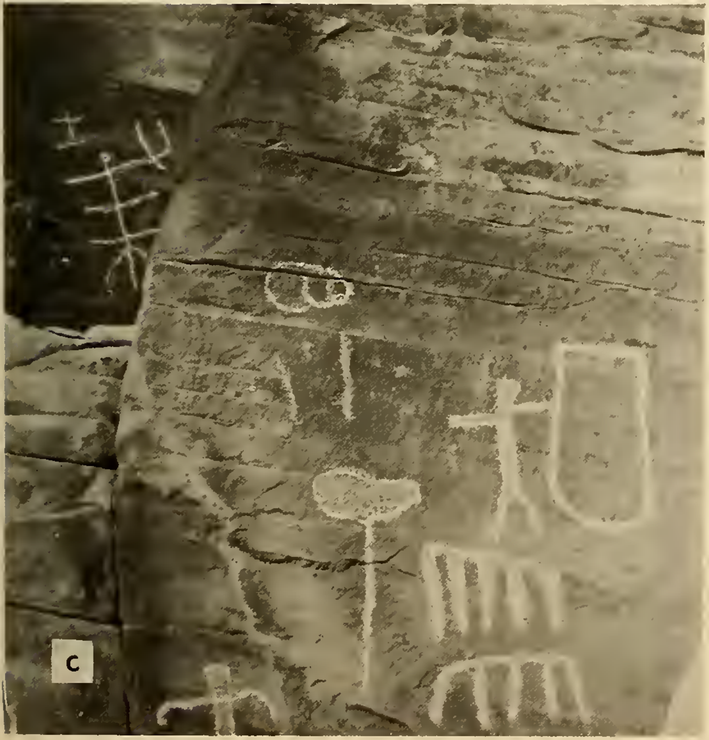

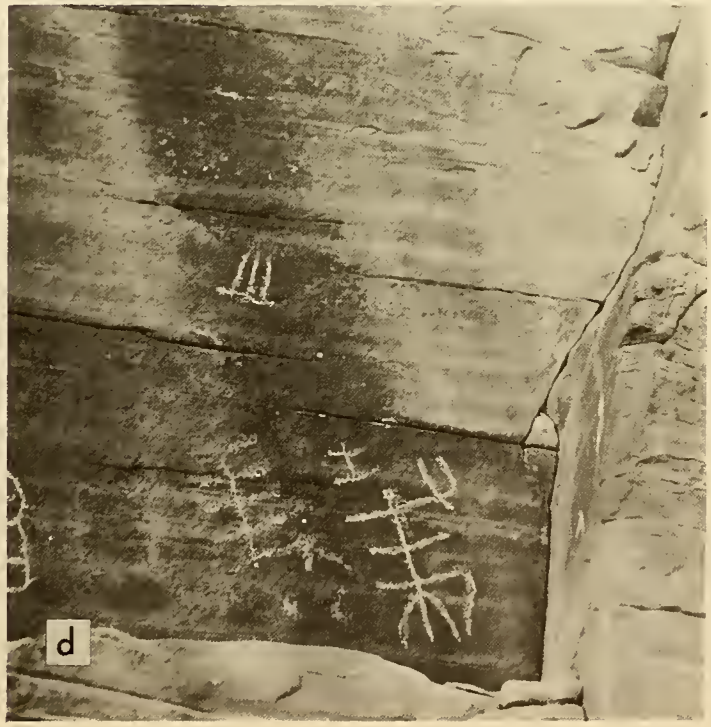

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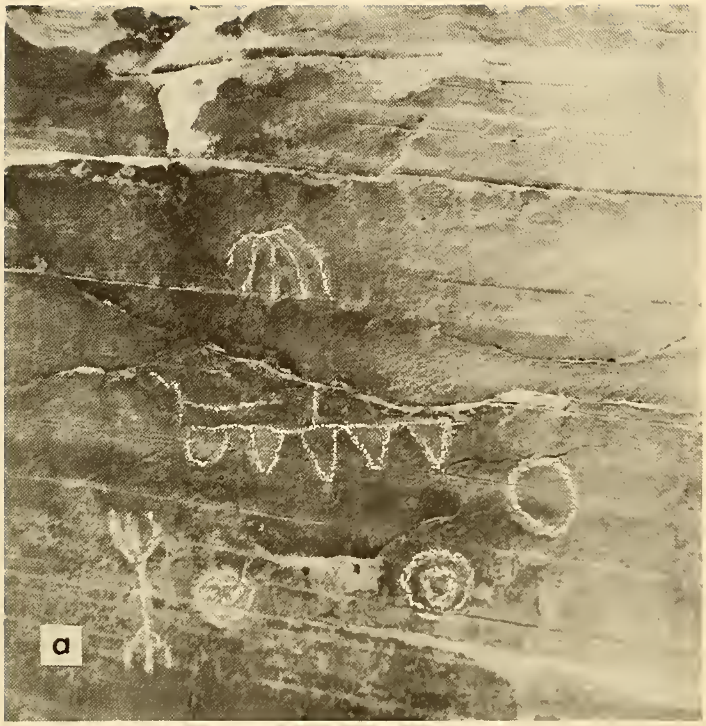

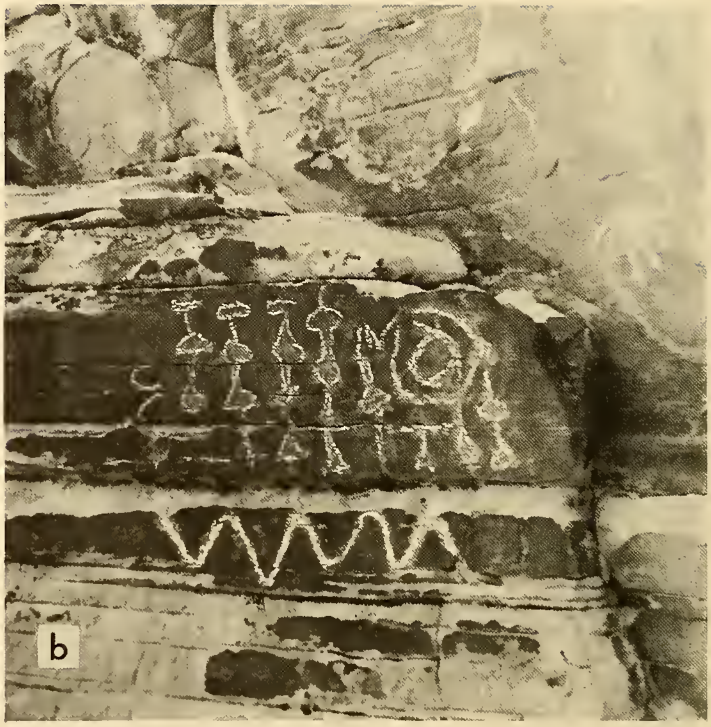

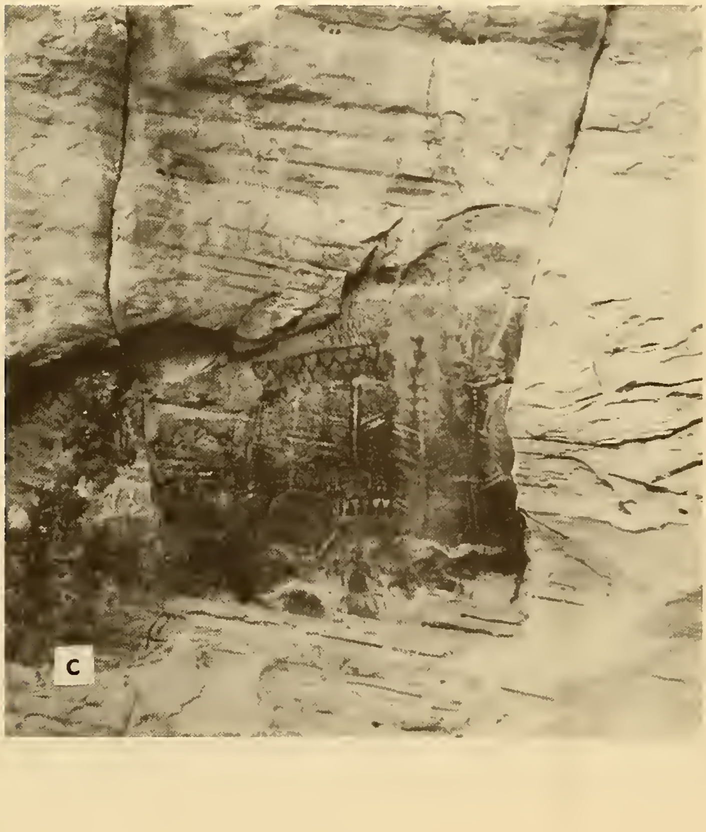

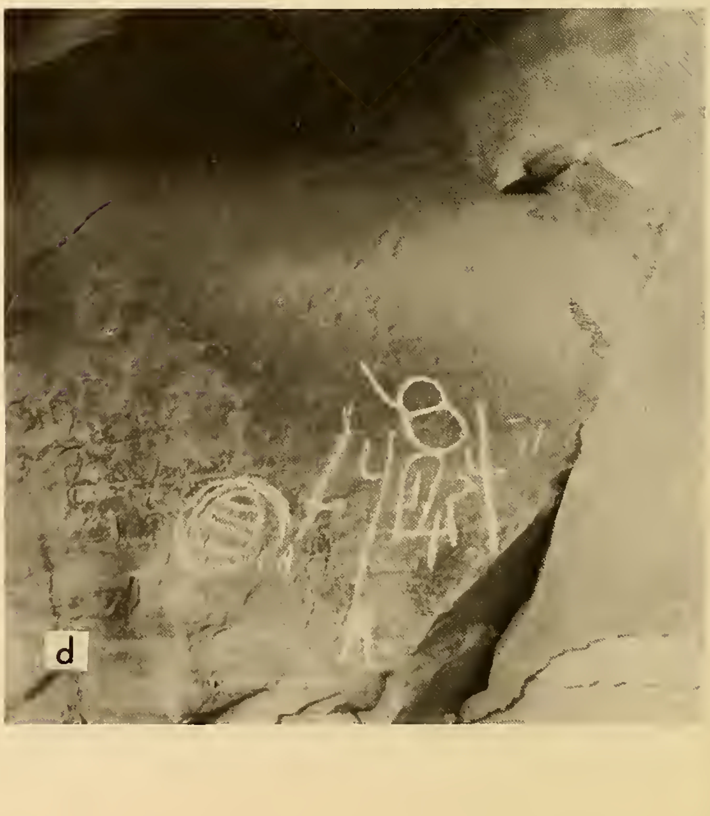

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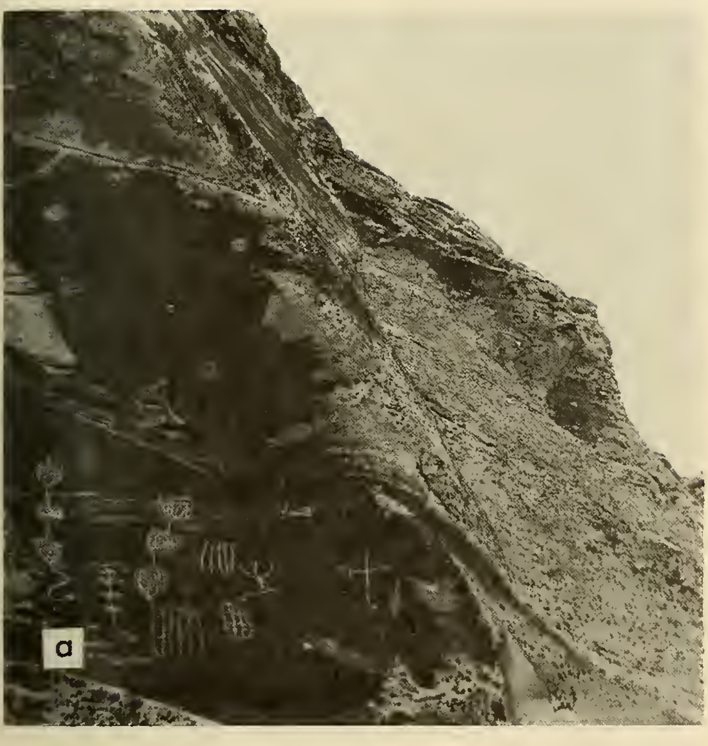

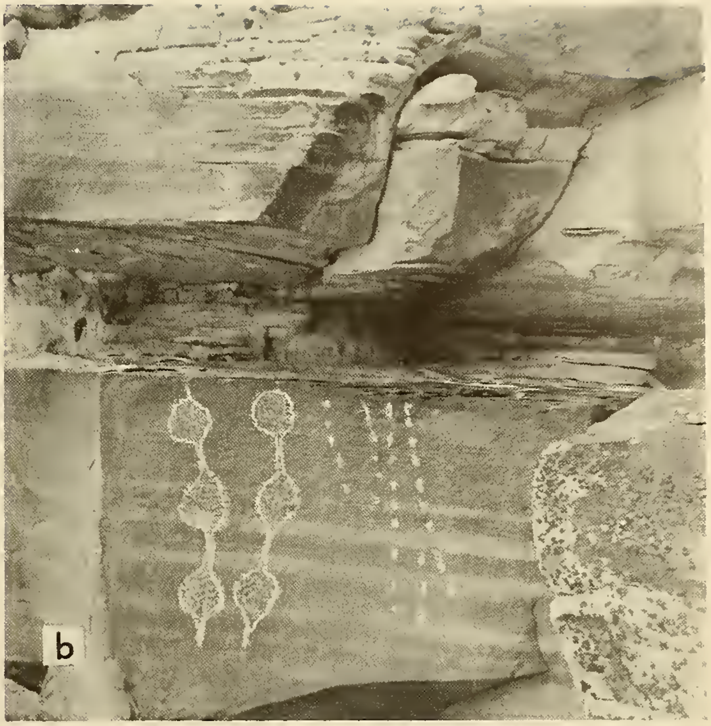

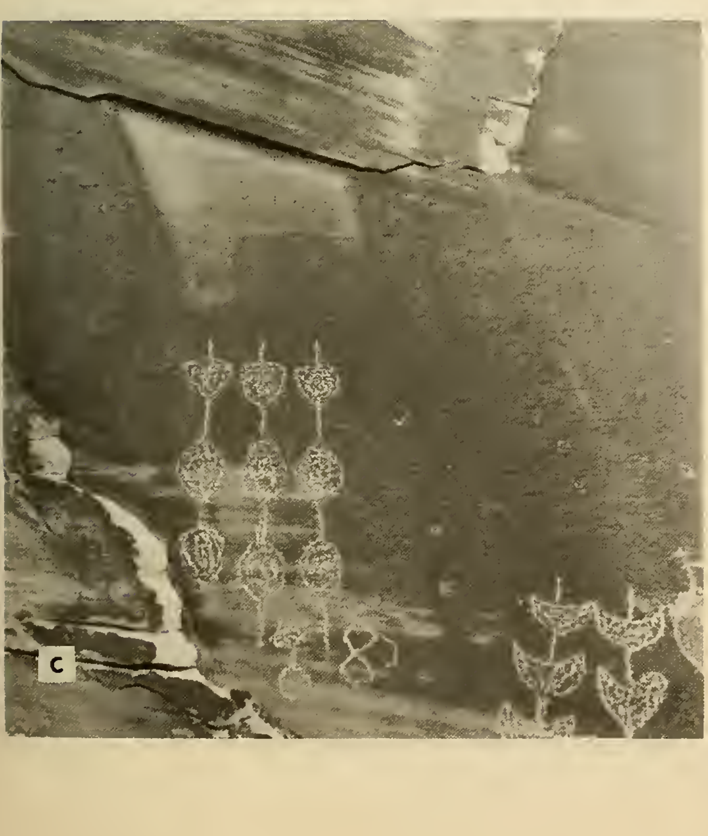

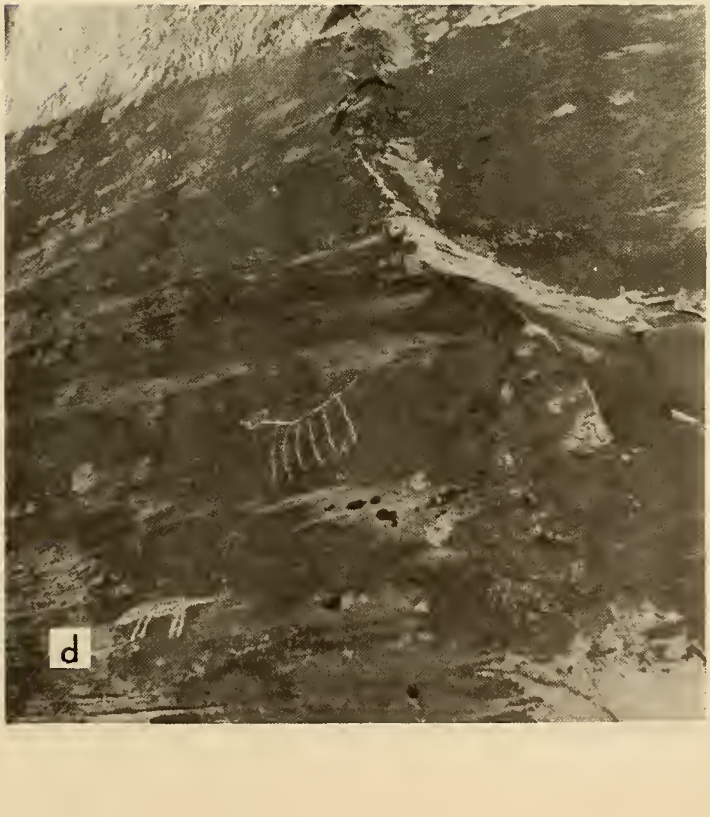

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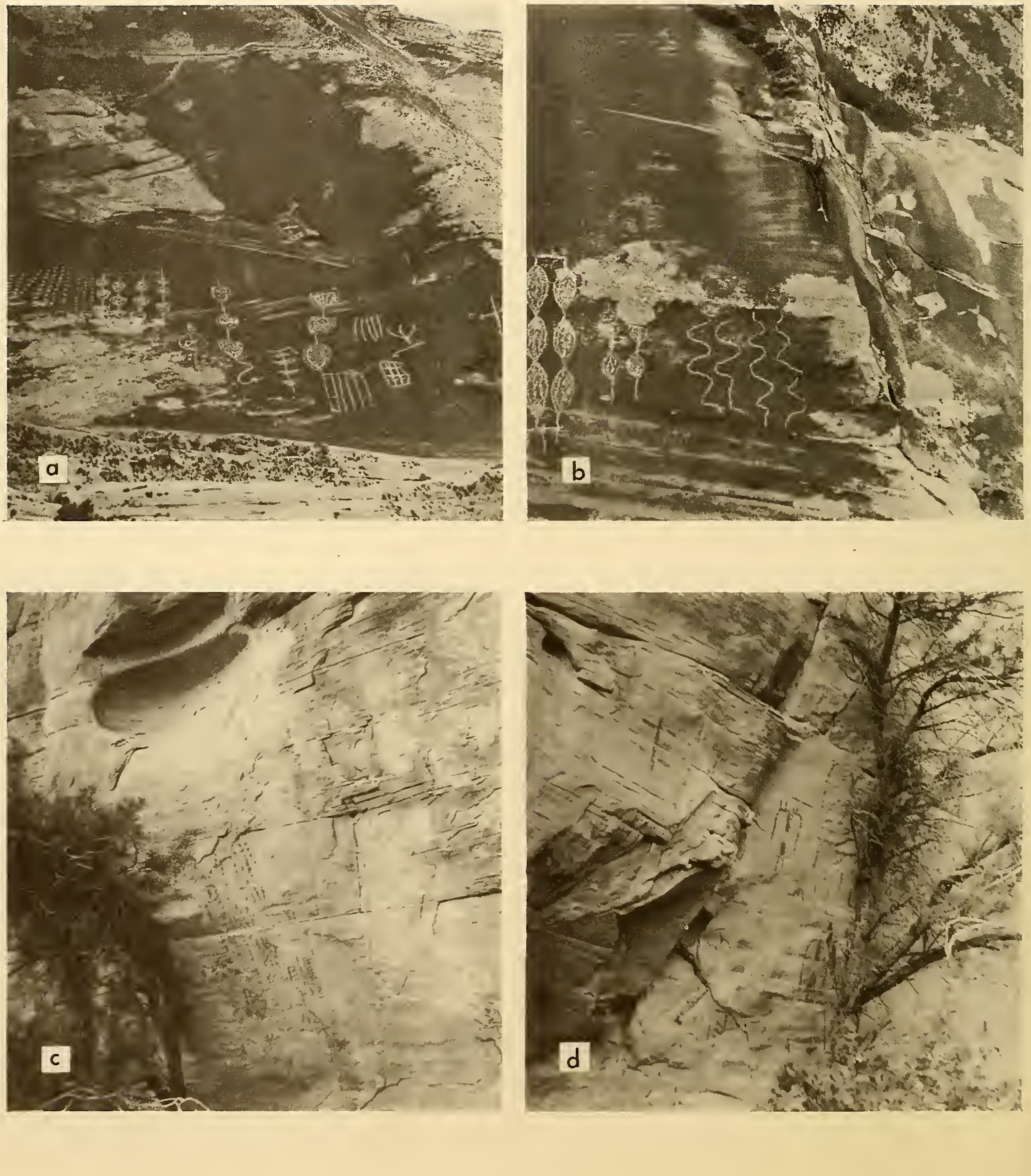

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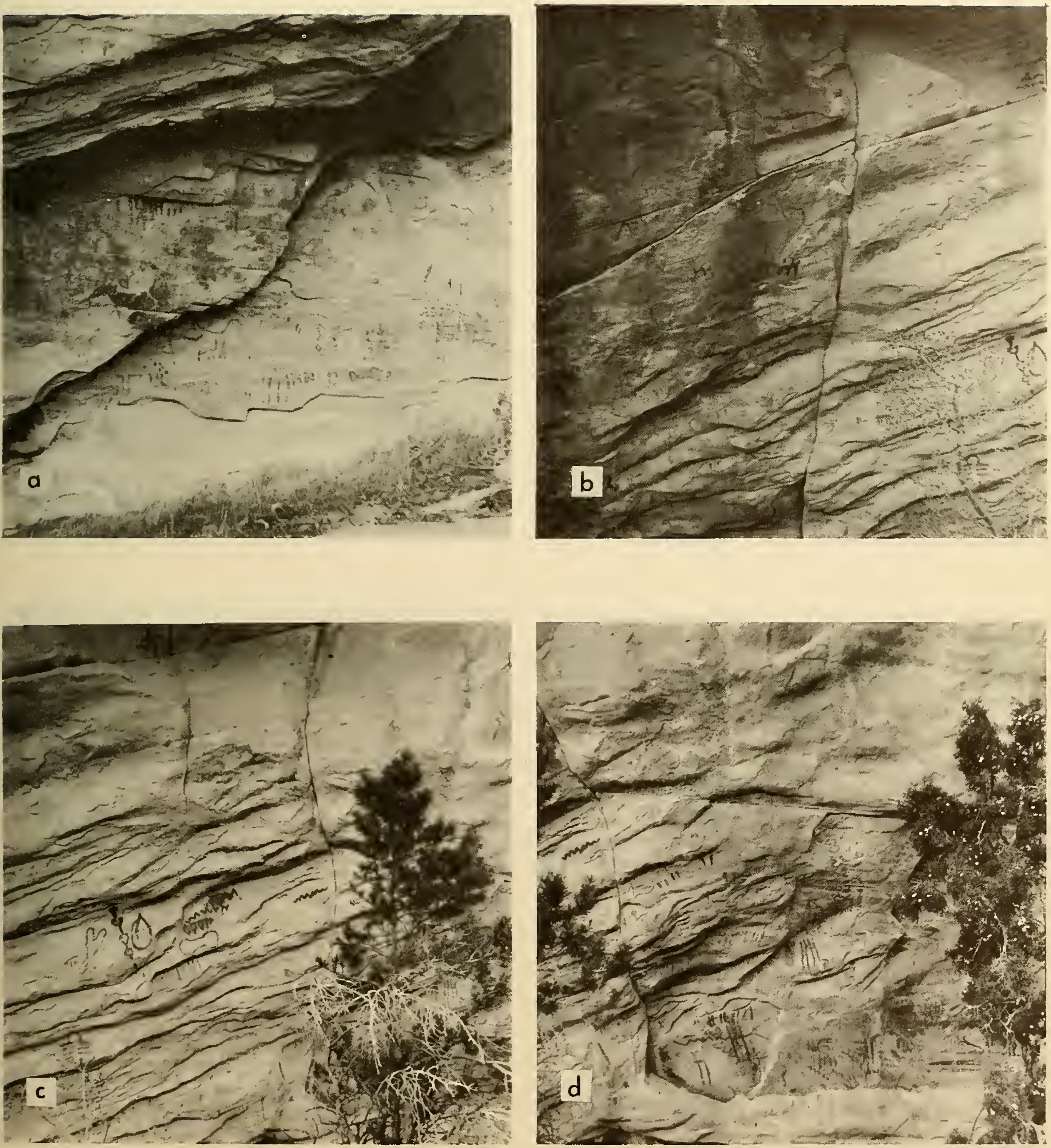

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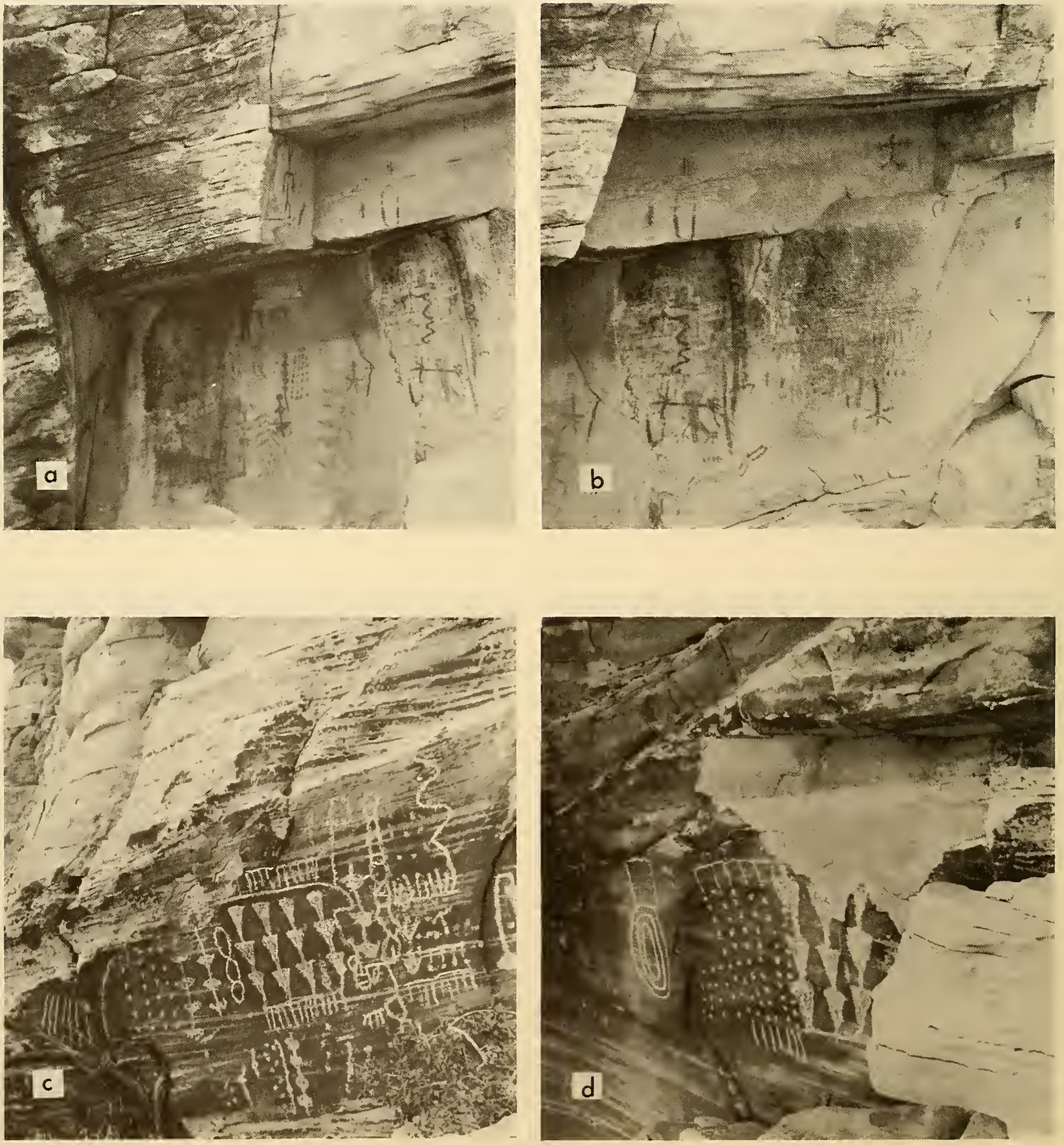

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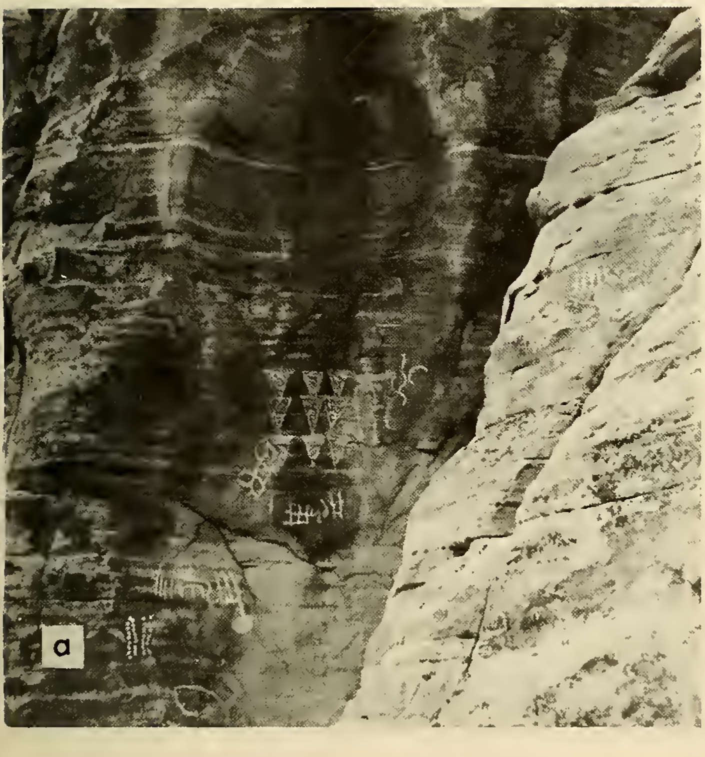

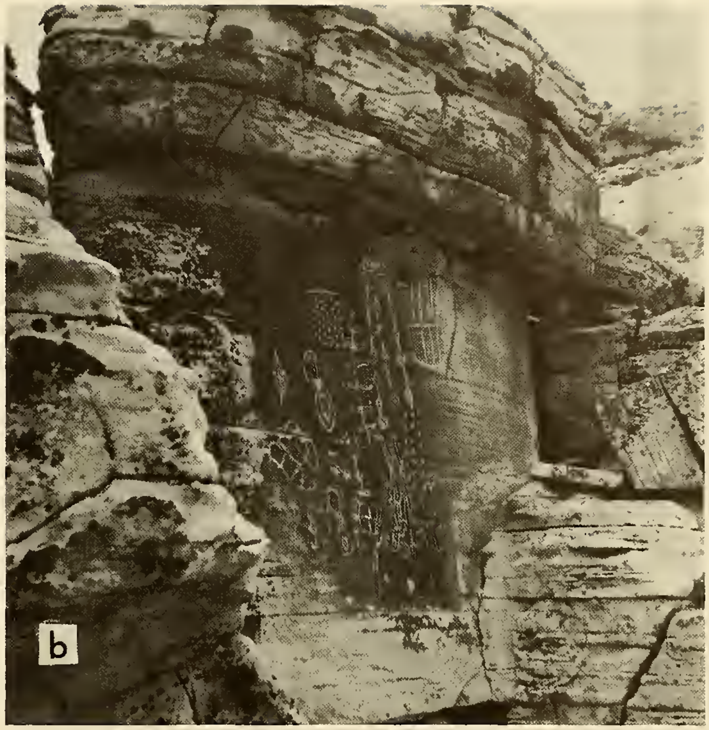

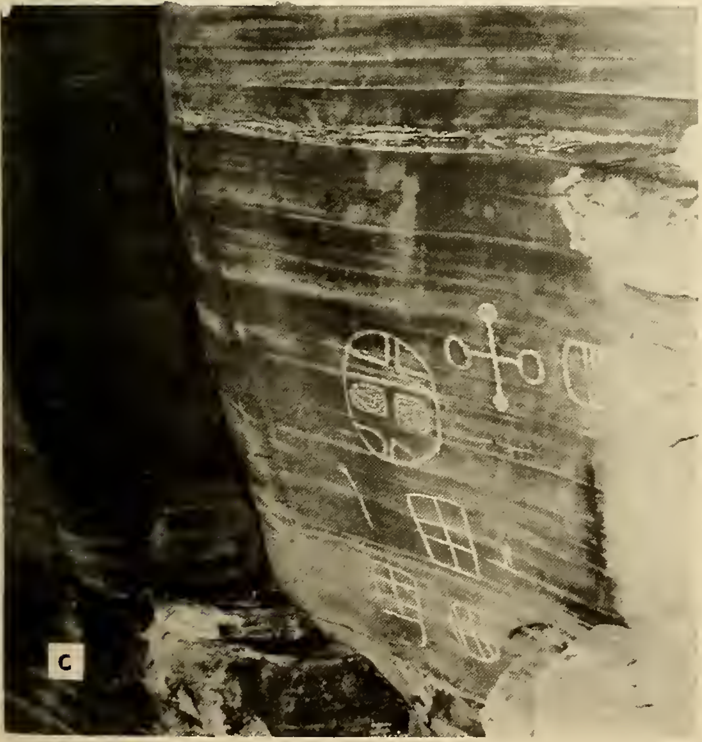

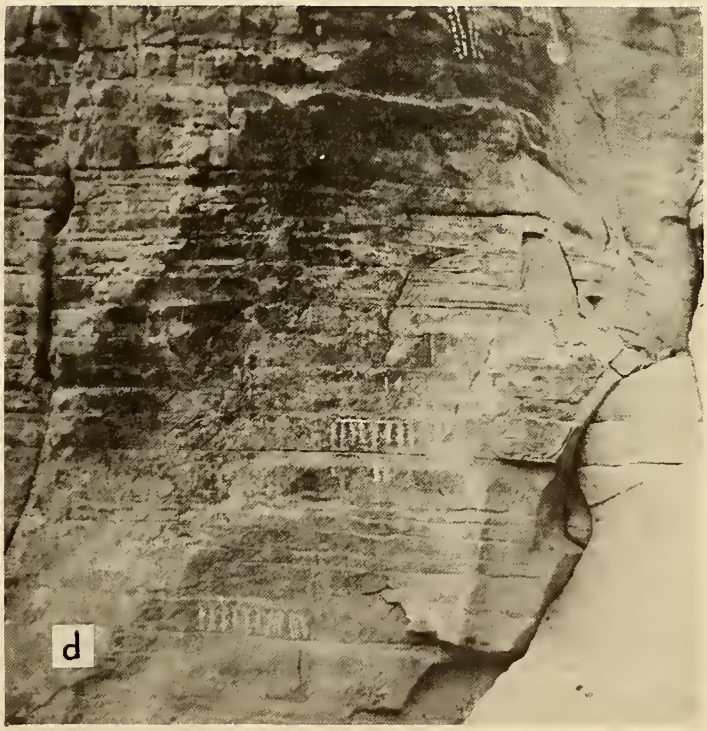

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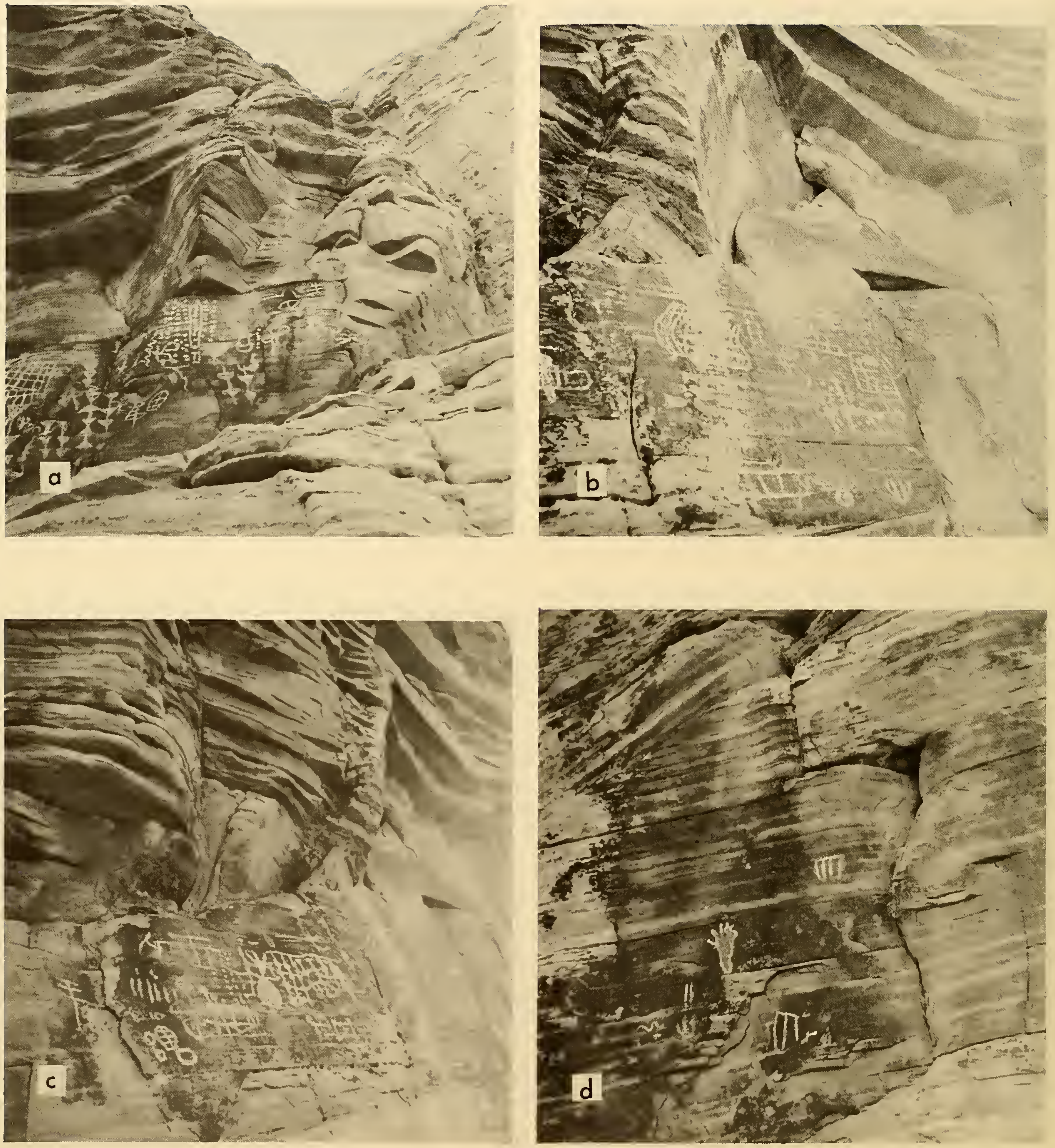

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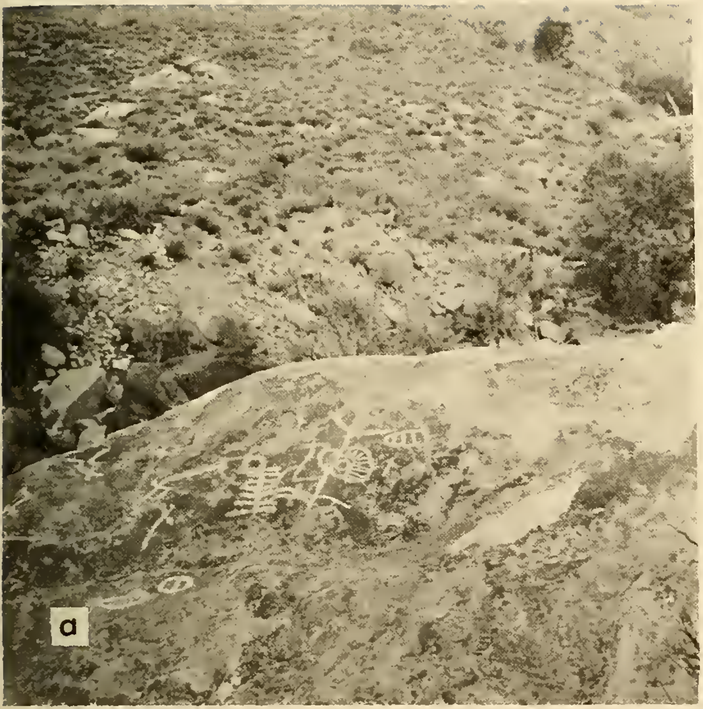
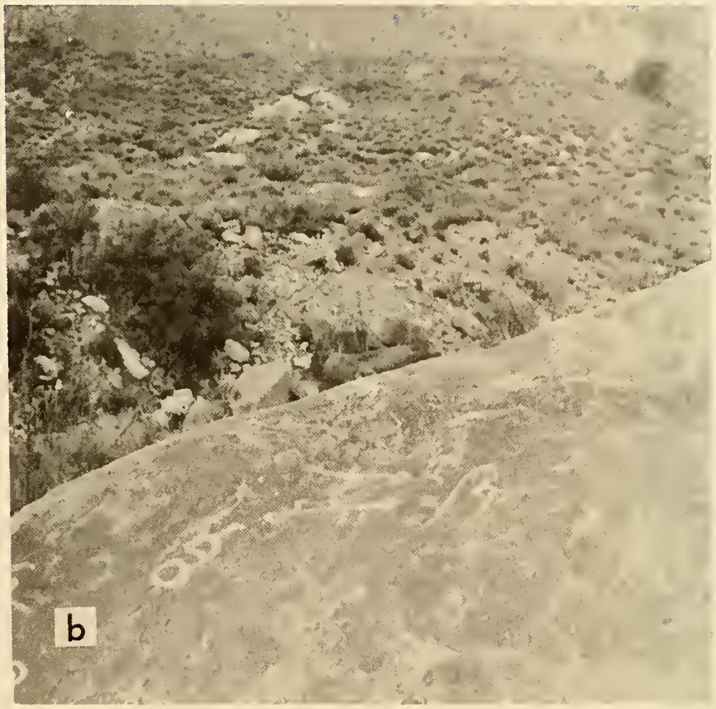
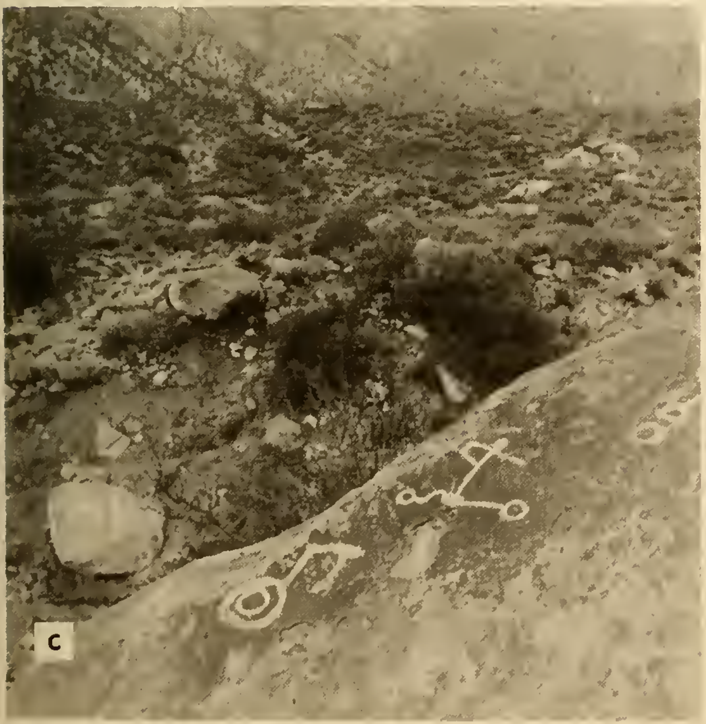
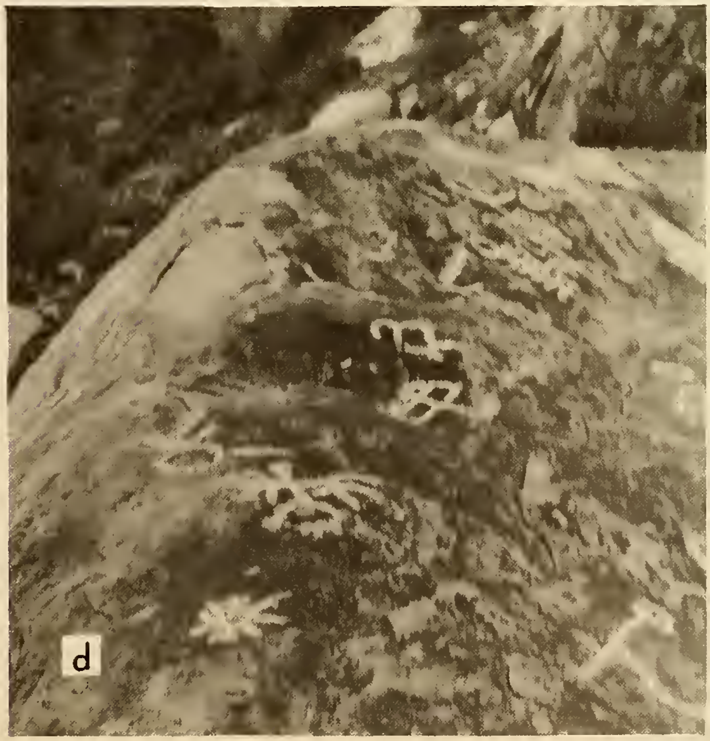




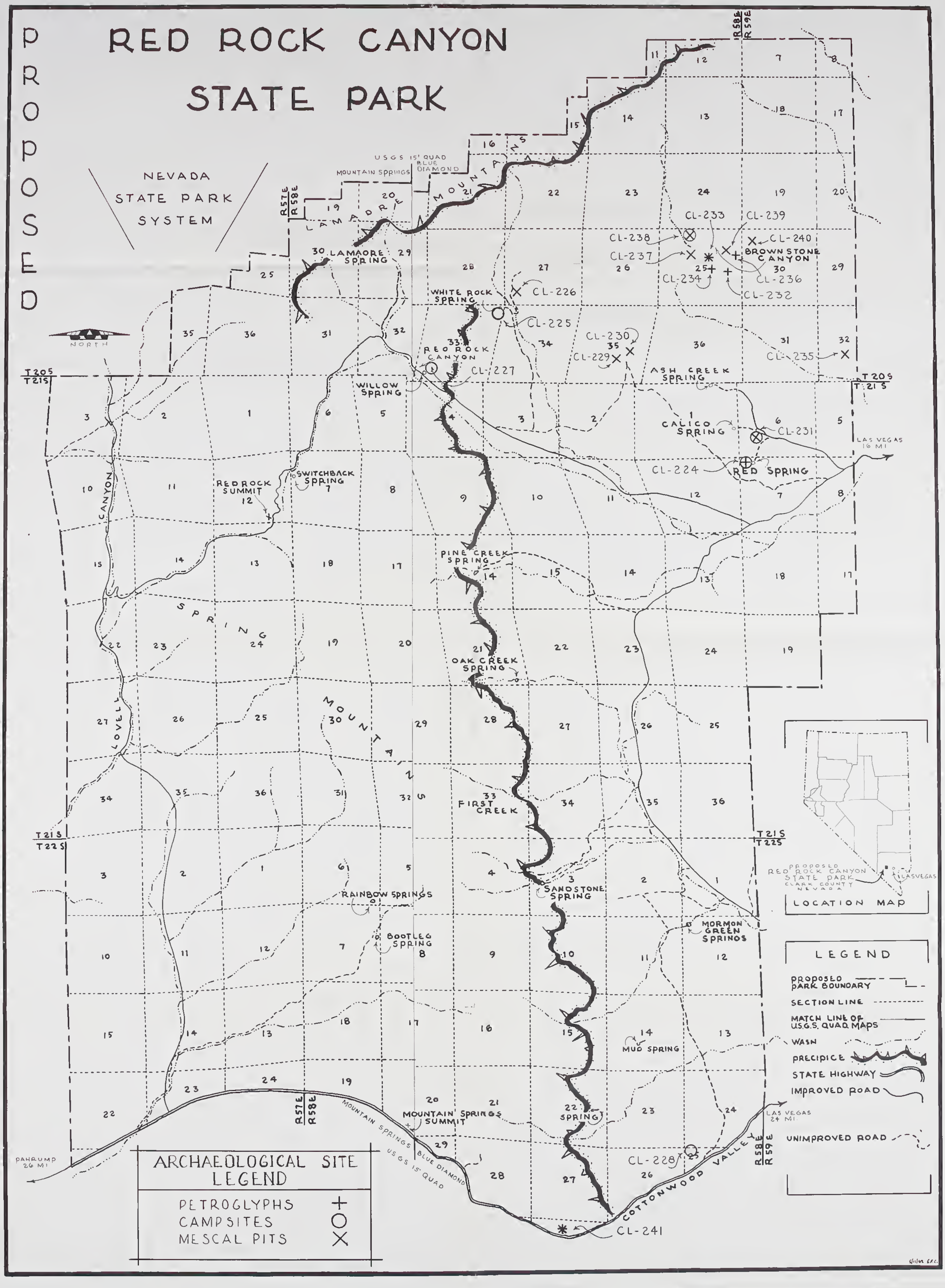




PSM

PROPOSED RED ROCK CANYON STATE PARK

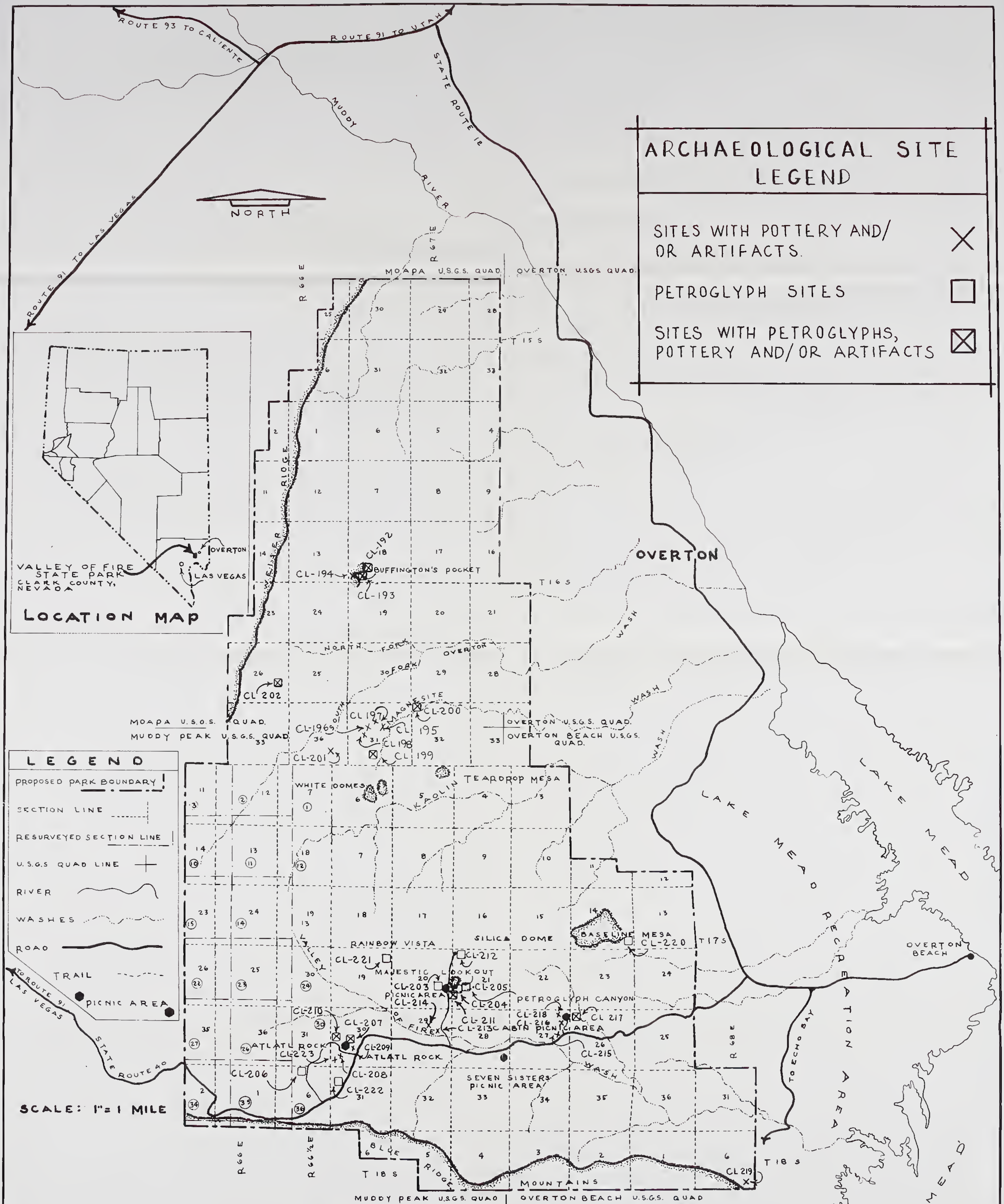
NEVADA STATE PARK SYSTEM



ARCHAEOLOGICAL SITE LEGEND

PETROGLYPHS	+
CAMPSITES	○
MESCAL PITS	×

NS



VALLEY OF FIRE STATE PARK

NEVADA STATE PARK SYSTEM

NEVADA STATE MUSEUM ANTHROPOLOGICAL PAPERS

No. 1. Notes on Paviotso Material Culture, Number 1. By Margaret M. Wheat (1959), 13 pp., 35 figs. (Out of Print).

No. 2. Notes on Some Paviotso Personalities and Material Culture. By Robert F. Heizer (1960), 16 pp., 9 pls. (Out of Print).

No. 3. Stuart Rockshelter. A Stratified Site in Southern Nevada. By Dick Shutler, Jr., Mary Elizabeth Shutler, and James S. Griffith (1960), 36 pp., 10 pls., 10 figs. (Out of Print).

No. 4. Honey Lake Paiute Ethnography. By Francis A. Riddell (1960), 87 pp., 5 pls., 2 maps. $1.00.

No. 5. Lost City. Pueblo Grande de Nevada. By Richard Shutler, Jr. (1961), 85 pp., 110 pls., 2 figs., 29 tables. $2.50.

No. 6. Washo Economy. By John Andrew Price (1962), 74 pp., 5 pls. $1.00.

No. 7. Archaeological Survey in Southern Nevada. By Richard Shutler, Jr., and Mary Elizabeth Shutler (1962), 38 pp., 35 pls., 2 maps. $1.00.

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